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ABSTRACT

This document contains the proceedings of the IFLA (International Federation of Library Associations and Institutions) 2001 conference, including the conference program and papers, and a list of participants. The theme of the conference was "Libraries and Librarians: Making a Difference in the Knowledge Age." Subthemes included: (1) advancing the leadership role of the librarian in the information age; (2) delivering lifelong learning across space and time; (3) managing information and technology in the knowledge age; (4) developing information policies for the knowledge age; (5) forging collaborative partnerships; and (6) making a difference to government and industry in economic development, to society in social and cultural development, to researchers and scientists exploring the frontiers of knowledge, to children and young adults in learning opportunities, and in the quality of life to the public. Papers from the IFLA professional groups include: Copyright and Other Legal Matters; papers); Reference Work; Social Science Libraries; Geography and Map Libraries; Acquisition and Collection Development; Library and Research Services for Parliaments; School Libraries and Resource Centres; Document Delivery and Interlending; Bibliographic Control; Library and Information Science Journals; Regional Activities; Education and Training; Rare Books and Manuscripts; User Education; Library Buildings and Equipment; Bibliography; Statistics; Public Libraries; Management of Library Associations; Classification and Indexing; Libraries for the Blind; Continuing Professional Education; Mobile Libraries; Library History; Information Technology; Women's Issues; Cataloging; Libraries for Children and Young Adults; University Libraries and Other General Research Libraries; Library Theory and Research; Preservation and Conservation; Art Libraries; Government Information and Official Publications; Free Access to Information and Freedom of Expression; Newspapers; Information Technology. (MES)

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ED 459 705

Libraries and Librarians:
Making a Difference in the Knowledge Age.
IFLA Council and General Conference:
Conference Programme and Proceedings
(67th, Boston, Massachusetts, August 16-25, 2001)

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67th IFLA Council and General Conference

ESPAÑOL

FRANÇAIS

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001, Boston, USA

The United States National Organizing Committee and the U.S. library community take great pleasure in inviting you to the 67th International Federation of Library Associations and Institutions (IFLA) Council and General Conference which will take place in Boston, Massachusetts, from August 16-25, 2001.

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Latest Revision: *September 11, 2001*

International Federation of Library Associations and Institutions
www.ifla.org

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

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Boston - America's Walking City

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INVITATION

The United States National Organizing Committee and the U.S. library community take great pleasure in inviting you to the 67th International Federation of Library Associations and Institutions (IFLA) Council and General Conference which will take place in Boston, Massachusetts, from August 16-25, 2001.

It has been over 15 years since IFLA was last held in the United States, and the U.S. is honored to be hosting IFLA 2001 at the dawn of this new century. The mission of the library has always been to facilitate the free flow of information in society. Librarians and libraries are challenged by the rapid changes taking place to continue to be leaders in fulfilling this eternal mission as the world moves from the Information Age into the Knowledge Age.

The City of Boston offers a perfect setting for IFLA2001 since it juxtaposes the historical with the cutting edge, the old and the new. Surrounded by the beautiful Charles River and the Atlantic Ocean, Boston is known as America's Walking City. From its downtown core to the outlying areas, Boston is a city of intriguing diversity. There's history and high technology, academic excellence and neighborhood charm. There are over 150 public, school, academic, and special libraries in the Boston metropolitan area, many of them world-renowned!

Just across the river Cambridge offers an exciting multicultural setting where visitors from around the world mingle in the shadow of two of the world's premier universities: Harvard University and the Massachusetts Institute of Technology (MIT). Boston also serves as the gateway to picturesque New England. No wonder over one million international visitors come to Boston every year.

IFLA 2001's stimulating programs and activities will offer you a wonderful opportunity to meet with your colleagues from around the world to discuss issues, exchange ideas, and evaluate new innovations and products to improve your knowledge and the library services that you provide. We look forward to seeing you in Boston!

Boston - America's Walking City

Surrounded by the beautiful Charles River and the Atlantic Ocean, Boston is known as America's Walking City. From its downtown core to the outlying areas, Boston is a city of intriguing diversity. There's history and high technology, academic excellence and neighborhood charm. There are over 150 public, school, and academic and special libraries in the Boston metropolitan area, many of them world renowned! Boston enjoys a mix of colonial charm and an urban sophistication with a thriving cultural scene.

Just across the river Cambridge offers an exciting multicultural setting where visitors from around the world mingle in the shadow of two of the world's premier universities: Harvard University and the Massachusetts Institute of Technology (MIT).

Boston also serves as the gateway to picturesque New England. No wonder over one million international visitors come to Boston every year.

Latest Revision: *October 18, 2000*

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CONFERENCE THEME AND SUBTHEMES

Theme

Libraries and Librarians: Making a Difference in the Knowledge Age

The library exists as an idea and a symbol as well as a physical reality. Throughout history the mission of the library -- to facilitate the free flow of information -- remains unchanged although change is constantly occurring in the ways in which librarians fulfill the library's mission. Librarians, as knowledge workers, collect, transmit and preserve recorded messages. They organize and manage the storage, retrieval and use of information. They provide personal assistance in tailoring information services for people and institutions. Librarians analyze, evaluate and synthesize the information they collect to create new forms of knowledge. The technology changes, but the mission endures.

The power of technology supports sophisticated systems for connecting people to new forms of knowledge and creates linkages between the expanding physical and intellectual universes.
By harnessing rapidly developing technology with a reaffirmation of the historical values and contributions of librarianship, the chaos and experimentation of the Information Age transforms into a new era of human development -- the Knowledge Age.

Subthemes

- Advancing the Leadership Role of the Librarian in the Information

Age

- Delivering Lifelong Learning Across Space and Time
- Managing Information and Technology in the Knowledge Age
- Developing Information Policies for the Knowledge Age
- Forging Collaborative Partnerships
- Making a Difference --
    - to Government and Industry in Economic Development
    - to Society in Social and Cultural Development
    - to Researchers and Scientists Exploring the Frontiers of Knowledge
    - to Children and Young Adults in Learning Opportunities
    - in the Quality of Life to the Public

(Approved by IFLA Professional Board, October 1998)

Latest Revision: *October 18, 2000*

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WHAT IS IFLA?

IFLA

Founded in 1927 the International Federation of Library Associations and Institutions is an independent international non-governmental association that has formal associate relations with UNESCO (United Nations Education, Scientific and Cultural Organisation). The aims of IFLA are to promote international understanding, co-operation, discussion, research and development in all fields of library activity and information science, and to provide a body through which librarianship can be represented in matters of international interest. The Federation currently has more than 1,500 members from 140 countries.

IFLA's Executive Board is responsible for IFLA's general policy, management and finance. The Professional Board monitors the planning and programming of professional activities carried out by IFLA's two types of bodies: professional groups (35 sections and 10 round tables organized in 8 divisions) and 5 core programs. We also have 11 discussion groups linked to a sponsoring section. Newly established in 1997 are two new Executive Board Committees, the Committee on Copyright and other Legal Matters (CLM) and the Committee on Free Access to Information and Freedom of Expression (FAIFE).

Divisions

1. General research libraries
2. Special libraries
3. serving the general public
4. control
5. Collections and services

6. Management and technology
7. Education and research
8. Regional activities

Core Programs

1. Universal Availability of Publications (UAP)
2. Universal Bibliographic Control and International MARC (UBCIM)
3. Preservation and Conservation (PAC)
4. Universal Data Flow and Telecommunications (UDT)
5. Advancement of Librarianship Program (ALP)

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IFLA and the United States

Many U.S. library associations, libraries, organizations and institutions are members of IFLA, and take an active role in developing leadership and policy for the association. The goals of U.S. librarians - access to information, intellectual freedom, public awareness - all have global implications and likewise, what happens globally affects U.S. libraries. The IFLA Conference was last held in the United States in 1985 in Chicago.

Latest Revision: *October 18, 2000*

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Conference Programme and Proceedings

Whilst this preliminary programme gives a general indication, IFLA reserves the right to make changes to this preliminary programme at any time. IFLA cannot be held responsible for any consequences of such changes. For more information about the programme, contact IFLA Headquarters: ifla@ifla.org

Friday, 17 | Saturday, 18 | Sunday, 19 | Monday, 20 | Tuesday, 21 | Wednesday, 22 | Thursday, 23 | Friday, 24 | Saturday, 25

All week

Banned in Boston - History of Censorship to Highlight the Nature of Censorship
Off site Exhibition organized by Free Access to Information and Freedom of Expression (FAIFE)

Friday, August 17, 2001

09.00-13.00

1. Professional Board *(Board Members only)*

14.00-18.00

2. Executive Board *(Board Members only)*

14.00-18.00

3. CB I General Research Libraries (Div I)
4. CB I Special Libraries (Div II)
5. CB I Libraries Serving the General Public (Div III)
6. CB I Bibliographic Control (Div IV)
7. CB I Collections and Services (Div V)
8. CB I Management and Technology (Div VI)
9. CB I Education and Research (Div VII)
10. CB I Regional Activities (Div VIII)

The above mentioned Coordinating Board Meetings are the business meetings of the IFLA Divisions. These are not usually open to conference delegates.

Saturday, August 18, 2001

The following SC Meetings are the business meetings of the Standing Committees of IFLA Sections. The EC Meetings are the business meetings of the Executive Committees of IFLA Round Tables. They may be attended by observers by permission of the chairs which is usually given. They are a good way of getting to know the work of a Section and may lead to direct involvement.

Off-site
SC I Public Libraries (Boston Public Library)

08.30-11.20

On Site: Hynes Convention Center

11. SC I Art Libraries
12. SC I Bibliography
13. SC I Classification and Indexing
14. SC I Document Delivery and Interlending
15. SC I Education and Training
16. SC I Government Information and Official Publications
17. SC I Information Technology
18. SC I Libraries for Children and Young Adults
19. SC I Libraries Serving Disadvantaged Persons
20. SC I Library Services to Multicultural Populations
21. SC I Library Theory and Research
22. SC I Science and Technology Libraries
23. SC I Serial Publications
24. SC I University Libraries and other General Research Libraries

11.30-14.20

25. SC I Acquisition and Collection Development
26. SC I Audiovisual and Multimedia
27. SC I Cataloguing
28. SC I Government Libraries
29. SC I Libraries for the Blind
30. SC I Library and Research Services for Parliaments
31. SC I Library Buildings and Equipment
32. SC I Reading
33. SC I Management and Marketing
34. SC I Social Science Libraries
35. SC I Preservation and Conservation
36. SC I Rare Books and Manuscripts
37. SC I School Libraries and Resource Centres
38. SC I Statistics
39. SC I Biological and Medical Sciences Libraries

12.00-15.00

40. Free Access to Information and Freedom of Expression (FAIFE) Business Meeting

14.30-17.20

41. SC I National Libraries

42. SC I Geography and Map Libraries
42a. SC I Reference Work
43. EC Management of Library Associations
44. EC INTAMEL
45. EC Library History
46. EC Mobile Libraries
47. EC Newspapers
48. EC Continuing Professional Education
49. EC User Education
50. EC Women's Issues
51. EC Library and Information Science Journals

17.30-18.30

52. Caucus: Canada
53. Caucus: France
54. Caucus: German speaking countries
55. Caucus: Netherlands
56. Caucus: Portuguese speaking librarians
57. Caucus: Commonwealth of Independent States (CIS)
58. Caucus: Nordic Countries
59. Caucus: United Kingdom
60. Caucus: United States
61. Caucus: Third world
62. Caucus: Spanish Speaking Librarians
63. *Unallocated*

Caucus: National, regional or language groups of participants are given an opportunity to meet on an informal basis early in the conference. Some of these groups have a longer tradition and are more structured than others. Most take the opportunity to discuss voting preferences on matters to be raised in Council meetings. Details of caucus meetings can usually be obtained from representatives of National Association Members of the countries concerned. The IFLA secretariat is not responsible for the organisation of these meetings.

Sunday, August 19, 2001

08.30-10.20

64. Internet Discussion Group

Are you using the Internet to deliver library Services? How are you using the Internet to preserve the cultural aspects of your community? Are you setting up public access Internet workstations in your library? How are you dealing with censorship issues? Join this group of librarians and information professionals from around the world to discuss these and other topics about the use of Internet in libraries and information centers. The Internet Discussion Group is a forum for exchanging ideas and information about the introduction and support for the use of the Internet in libraries and by library users.
Monica Ertel, Director of Research, North America Korn/Ferry International, will chair this Discussion Group.

08.30-10.20

65. Performance Measurement in Public Libraries Discussion Group

08.30-10.20

66. Repository and Storage Libraries Discussion Group

This discussion group explores the role of repository libraries in providing access to materials held in centralized storage facilities serving specialized or cooperative library needs. Participants will discuss topics including the decision-making that leads to transfer to remote storage, the development of robotic on-demand scanning systems for delivering remotely held materials, and case studies of successful centralized repository libraries. Invited on the discussion panel are:

1. PENTTI VATTULAINEN (Director, National Repository Library, Finland)
2. BEVERLY LYNCH (Director, Center for Research Libraries, USA)
3. ELIZABETH VERNON (Judaica Technical Services Librarian, Harvard University, Cambridge, USA)
4. SAYYED CHOUDHURY (Director, Digital Knowledge Center, Johns Hopkins University, Baltimore, USA)

08.30-10.20

66a. Sustainable Communities Discussion Group

Sustainable Communities provide for the needs of their communities today while ensuring their long-term sustainability for the future. Many community members are becoming more involved in learning about sustainability through a variety of resources available in the library that can expand their knowledge and increase their understanding and expertise on this increasingly important topic. Libraries can provide an excellent resource venue for learning about sustainability. This discussion group will address what approaches and techniques libraries are using successfully to involve members of their communities in the sustainability equation.

08.30-11.20

67. SC I Africa

08.30-11.20

68. SC I Asia & Oceania

08.30-11.20

69. SC I Latin America & Caribbean

08.30-11.30

70. Social Responsibilities Discussion Group

Reports will be given on the work of the 13 working groups within this Discussion Group.

09.00-10.20

71. **Newcomers Session** - *SI*

09.00-11.00

72. Copyright and Other Legal Matters Business Meeting

09.00-12.15

73. Library and Research Services for Parliaments with Government Information and Official Publications Joint Conference and Town Hall Meeting

'Information and Research Support to Parliaments and Legislatures: New Challenges and the Public Interest'

1. Developments in technology and their possible implications for legislative services
   DAN MULHOLLAN (Director, Congressional Research Service, Library of Congress, Washington, USA)
2. Library partnerships bring information to people from the newly restored parliament of Scotland
   PAUL ANDERSON (Library Liaison Officer, The Scottish Parliament, Edinburgh, Scotland)
   ParlGovInfoSpeak: wherein our international panel faces a Town Hall
   Meeting led by: FRANK KIRKWOOD (Reference Librarian, Library of Parliament, Ottawa, Canada)

10.30-12.20

74. Friends and Advocates of Libraries Discussion Group

This discussion group will discuss the question of forming friends groups in nations with strong library programs, and the question of providing library support and finding friends and supporters in those nations without strong public library support.

10.30-12.20

75. Public Libraries - *SI*

'Library of the Future. A Profile of the Richmond Public Library, Ironwood Branch (Richmond, Canada)'

1. GREG BUSS (Chief Librarian, Richmond Public Library, Richmond, Canada)
2. CATE McNEELY (Deputy Chief Librarian, Richmond Public Library, Richmond, Canada)

10.30-12.20

76. Unicode Discussion Group

10.30-12.20

77. Performance Measurement in Academic Libraries Discussion Group

10.30-12.20

78. Marketing Library Services to Academic Communities Discussion Group

A report on a marketing projects at St. Mary's University (Halifax, Nova Scotia, Canada) and the library's response. The speaker will be Madeleine Lefebvre, and the speaker will be followed by a discussion period.

79. *Unallocated*

11.30-13.20

80. Licensing Discussion Group

The Discussion Group on Licensing covers some of the most important and timely issues facing libraries today, particularly as electronic information resources appear increasingly to be governed by contracts, which are used either in tandem with copyright law or to its exclusion. The DG has explored and continues to explore public policy issues, relationship of licenses and law, user rights, pricing, negotiating, and also training and workflow topics.

Recently, several key organizations have announced new programs that support free or very inexpensive scholarly e-journal access for developing nations (with particular emphasis currently on the biomedical sciences, as well as in other fields).

Accordingly, the IFLA Discussion Group on Licensing will devote its entire two-hour discussion period in Boston to these import and exciting developments.

A few brief presentations will be given, after which the floor will be opened up to reports of other free access programs and discussion from all participants regarding impacts, as well as whether IFLA should take a role in actively supporting such access.

The discussants will include::

- Barbara Aronson, World Health Organization Library, Geneva, Switzerland (arrangement with six biomedical publishers to provide their journals)
- Karen Hunter, Elsevier Science, New York, USA (participating in WHO access program)
- Michael Kay, Open Society institute, Budapest, Hungary (access programs for 38 Eastern European countries plus South Africa)
- Bonnie Zavon, HighWire Press, Stanford, USA (HighWire access program for developing countries).

11.30-13.20

81. Metadata Discussion Group

The Discuss Group will bring together different constituencies with common interests in metadata, and provide an opportunity for DG participants to engage in dialogue around those interests.

11.45-12.45

82. UNESCO Open Forum - *SI*

- The new Information for All Programme
  AZIZ ABID (UNESCO Information Society Division, Paris, France)
- Preserving our Digital Heritage
  AZIZ ABID (UNESCO Information Society Division, Paris, France)
- The Iberoamerican and Caribbean Digital Library Project
  ISIDRO FERNANDEZ-ABALLI
- The Slave Trade Archives Project
  AZIZ ABID (UNESCO Information Society Division, Paris, France)

12.30-15.00

83. Committee on Copyright and other Legal Matters - *SI*

- *'Privacy in the Digital Environment - issues for libraries'*
- *'Licensing issues for Central and East European Librarians'*

1. Privacy in the Digital Environment - issues for libraries

MICHAEL GORMAN, Dean of Library Services, California State University, Fresno, USA

2. Privacy in the Digital Environment - issues for libraries
   SUE BROWN (Chair of the UK Copyright and Indexing Group, UK)
3. Licensing issues for Central and East European Libraries
   Les licences d'accès aux ressources électroniques dans les bibliothèques d'Europe centrale et orientale
   MAJA ZUMER (National and University Library, Ljubljana, Slovenia)

13.00-14.30

83a. Information and Documentation Discussion Group

13.00-13.45

84. Industry Updates I - OCLC

Learn more about the OCLC Global Strategy and hear about new services coming from OCLC, including digital archiving and the Library of Congress/OCLC Collaborative Digital Reference Service with 24/7 access.

14.00-14.45

84a. Industry Updates II - 3M

15.00-15.45

85. Extra CB Div I - to elect PC representative
86. Extra CB Div II - to elect PC representative
87. Extra CB Div III - to elect PC representative
88. Extra CB Div IV - to elect PC representative
89. Extra CB Div V - to elect PC representative
90. Extra CB Div VI - to elect PC representative
91. Extra CB Div VII - to elect PC representative
92. Extra CB Div VIII - to elect PC representative

15.45-16.00

93. Extra PB Meeting - to elect PC chair

94. *Unallocated*

16.00-17.30

95. Council I - *SI*

17.45-19.00

96. Opening of the Exhibition

Monday, August 20, 2001

08.30-10.20

97. Genealogy and Local History Discussion Group

'Genealogy and Local History Librarians Making a Difference to Society in Social and Cultural Development'

1. FRODE BAKKEN (President, Norwegian Library Association, Norway)
2. JUDITH PROWSE REID (Head, Local History and Genealogy Reading Room, Library of Congress, Washington, DC, USA)
3. CURT B. WITCHER (Manager, Historical Genealogy Department, Allen County Public Library, Fort Wayne, USA)

08.30-10.20

97a. Public Libraries as Catalysts for Democracy Discussion Group

Libraries foster democracy by providing access to information that affords all citizens the opportunity to participate in their societies. This discussion group will focus on sharing those strategies used by public libraries to advance democracy in their communities.

08.30-11.00

98. Reference Work

'How is virtual reference different from face-to-face reference? Guidelines and new competencies for reference services to the remote user'

1. Are you ready for real-time remote reference? New question-handling skills and library policies needed to move the desk (and you) to the web
   ANNE G. LIPOW (Director, Library Solutions Institute and Press)
2. E-mail reference: refocus and revise. Experiences from Gelman Library
   VERA FULLERTON (Gelman Library, George Washington University, USA)
3. Applying Information Competency to Digital Reference
   Appliquer la compétence de l'information à la référence numérique
   LISA ELLIS and STEPHEN FRANCOEUR (Newman Library at Baruch College, New York, USA)
4. Collaborative E-reference: A Research agenda
   ZORANA ERCEGOVAC (Director, Project LEAP, University of California, Los Angeles, USA)
5. The Public Library's Role in the Danish Information Society: demand for new competencies?
   Le rôle des bibliothèques publiques dans la société de l'information danoise : quelles nouvelles compétences sont demandées?
   BODIL WÖHNERT (Central Library Esbjerg, Esbjerk, Denmark)
6. Follow-up on the Collaborative Digital Reference Service Project
   DIANE NESTER KRESH (Director, Public Services Collections, Library of Congress, Washington, USA)

08.30-11.00

99. Social Science Libraries with Government Libraries and Management and Marketing - *SI*

'Knowledge Management for Not-For-Profit Organizations'

1. Knowledge Management, User Education, and Librarianship
   MICHAEL E.D. KOENIG (Dean and Professor, Palmer School of Library and Information Science, Long Island University, Brookville, USA)

2. Knowledge Management at the Finnish Government - Now, Never or Later
   MAIJA JUSSILAINEN (Project Manager, Ministry of Finance, Public Management Department, Helsinki, Finland)
3. Japan InK - Distributing the Information Networked Knowledge (InK) Base to the Japanese Research Community
   EISUKE NAITO (Director, Human and Social Information Research, National Institute of Informatics, Tokyo, Japan)
4. Knowledge Sharing in a Learning Resource Center by Way of a Metro Map Metaphor
   TOVE BANG (Library Director, The Aarhus School of Business, Aarhus V, Denmark)

08.30-11.00

100. Geography and Map Libraries

'Digitizing Cartographic Materials'

1. Digitization of Cartographic materials: National Archives of Canada
   BETTY KIDD (Acting Director General, Canadian Archives Branch, National Archives of Canada, Ottawa, Canada)
2. Digitization projects at the Library of Congress Geography and Map Division
   JOHN HEBERT (Chief, Geography and Map Division, Library of Congress, Washington, USA)
3. La numérisation des documents cartographiques anciens: supports traditionnels et nouvelles technologies
   PIERRE-YVES DUCHEMIN (Bibliothèque nationale de France, Paris, France)

08.30-12.30

101. Acquisition and Collection Development Workshop

'Exchange of Publications and Projections for its Future'

1. Les échanges internationaux de publications : Pourquoi et comment? Quelles perspectives d'avenir?
   CATHERINE GAZIELLO (Bibliothèque nationale de France, Paris, France)
2. The international book exchange in Russian libraries: yesterday, today and tomorrow
   Der internationale Literaturtausch in russischen Bibliotheken: gestern, heute und morgen
   Международный книгообмен в библиотеках России: вчера, сегодня, завтра
   GALINA A. EVSTIGNEEVA (Russian National Public Library for Science and Technology, Moscow, Russian Federation)
3. International book exchange: has it any future in the electronic age?
   Les échanges internationaux de publications, ont-ils l'avenir a l'ère électronique ?
   Есть ли будущее у международного книгообмена в электронную эру?
   ALEXIS ROMANOV and TATIANA V. PETROUSSENKO (National Library of Russia, St Petersburg, Russian Federation)
4. USA - Russia Library Materials Exchanges: Present and Future
   NADIA ZILPER (Slavic and East European Resources, Collection Development Department, Davis Library, University of North Carolina, Chapel Hill, USA)
5. Publication, platform and exchange: collaborating with small-scale publishers
   RIITTA AUTERE (Exchange Official, Exchange Centre of Scientific Literature, Helsinki, Finland)
6. Les Echanges de publications universitaires au Sénégal
   SOULEYMANE DIOUF (Bibliothèque Centrale, Université Cheikh Anta Diop de Dakar, Dakar, Senegal)
7. Present state and future of the international exchange of publications in the National Diet Library
   HISANORI TANAKA (Acquisitions Division, National Diet Library, Tokyo, Japan)

08.30-12.30

102. Library Theory and Research Workshop

'Collaboration between the LIS researcher and the work of the practitioner - making a difference in the Knowledge Age'

1. Leadership in libraries: theory and practice
   BEVERLY LYNCH (Interim President, Center for Research Libraries, Chicago, USA)

There will be 5 case studies on the same topic presented by:

1. JOEY RODGER (Urban Libraries Council, Leadership Institute for Public Libraries Directors, USA)
2. ALTHEA JENKINS (Association of College and Research Libraries/Harvard Program, Chicago, USA)
3. JEFFERY HORRELL (UCLA Senior Fellows Program, Harvard University, Cambridge, USA)
4. ANNE MARIE GOLD (Stanford-California State Library Institute on 21st Century Librarianship, USA)
5. T.B.A.

08.30-15.30

103. Library and Research Services for Parliaments: Research Seminar

Seminar co-ordinator: Dr J R Verrier, Head, Australian Parliamentary Information and Research Service, Parliament of Australia

Panel 1: *'How parliamentary research services have evolved: how they were created, to whom do they report (then and now) and how their charter has changed'*

1. The role of the Directorate of Studies in the Legislative Work of the Hellenic Parliament
   STAVROULA VASSILOUNI (Research Fellow, Directorate of Studies, Hellenic Parliament, Athens, Greece)
2. Integration of Information Services in the Parliament of Zimbabwe
   LYN CHIWANDAMIRA (Head, Parliamentary Information Provision and Analysis Service, Parliament of Zimbabwe, Harare, Zimbabwe)
3. Establishing a research service in the Norwegian parliament: why the right time was now
   BRIT FLØISTAD (Head, Research Service of the Norwegian Parliament, Oslo, Norway)
4. Challenges and opportunities to deliver research services to parliamentarians in the Japanese Diet
   MICHIYO TAKEDA (Legislative Reference and Information Resources Division, Research and Legislative Reference Bureau, National Diet Library, Tokyo, Japan)

Panel 2: *'The Case for and the Case against Separate Parliamentary Library and Research Services in the Context of the Continuum debate'*

1. Friends or fences: relationships matter more than structures
   MOIRA FRASER (Parliamentary Librarian, Parliamentary Library of New Zealand, Wellington, New Zealand)
2. Functioning of the Bureau of Research as a Separate Unit of Parliamentary Services: Obstacles and Challenges
   DONNA SCHEEDER (Deputy Assistant Director, Congressional Research Service, Library of Congress, Washington, USA)

Panel 3: *'The comparative advantage of parliamentary research services in changing political contexts and a* *competitive information environment'*

1. Essential information for post-encyclopaedic parliaments: the Italian case
   GIOVANNI RIZZONI (Chamber of Deputies, Rome, Italy)
2. The "disadvantaged" or "special" legislator client: the parliamentary research service's challenge
   KOSI KEDEM (Member of Parliament, Parliament of Ghana, Accra, Ghana)
3. One of a kind: parliamentary information and research services for parliamentarians - and Australian Senator tells
   ROSEMARY CROWLEY (Senator, Parliament of the Commonwealth of Australia, Canberra, Australia)

09.00-10.20

104. Newcomers Session - *SI*

09.30-12.00

105. Statistics Browsing Session

Off-site: *Simmons College*

This Browsing Session will feature web-based library statistics. The idea is to present various countries' attempts to use the web for either collecting or presenting their national library statistics or both.

10.30-13.00

106. School Libraries and Resource Centres - *SI*

'School Libraries: making a difference in learning'

1. Information literacy: a whole school reform approach
   LESLEY FARMER (Associate Professor, California State University, Long Beach, California, USA)
2. Observation des pratiques informationnelles des professeurs de collège français: contribution pour appréhender la multidimensionnalité de la recherche d'information enseignante
   VINCENT LIQUETE (Documentaliste-Formateur, IUFM d'Acquitaine, Carbon-Blanc, France)
3. The role of works of imagination in preparing young people for the information society
   GAYNER EYRE (Lecturer, Co-Director, Centre for Information Studies, Charles Sturt University, Wagga Wagga, NSW, Australia)
4. Say yes to school library provision - a project by the Harare Junior Council
   COURAGE MUDZONGA and DRIDEN KUNAKA (UNICEF, Harare, Zimbabwe)

107. *Unallocated*

11.00-13.30

108. Document Delivery and Interlending

'End User Involvement in Interlibrary Loan and Document Delivery'

1. The Catalogue collectif de France : Opening Interlending Services to end users
   CHRISTELLE CREFF (Project Manager, Document Supply Service, Bibliothèque nationale de France, Paris, France)
2. Bibliotek.dk : Immediate access to Danish libraries - a path to follow

Bibliotek.dk : l'accès immédiat aux bibliothèques danoises - un chemin à suivre
LONE HANSEN (Library Advisory Officer, Danish National Library Authority, Copenhagen, Denmark)

3. Interlibrary Loan in Mexico: two solutions to an age-old problem
   Préstamo Interbibliotecario en México: Dos soluciones a un viejo problema
   ELDA MONICA GUERRERO (Consultant, Centro Nacional de las Artes Mexico City, Mexico) DANIEL MATTES DURRETT (University Librarian, Universidad Anahuac, Mexico City, Mexico)
4. We're still here: Traditional ILL after OhioLINK Patron-initiated requesting and Ejournals
   JENNIFER J. KUEHN (Head, Interlibrary Loan, Ohio State Library, Columbus, USA)
5. Union Catalogs and virtual Union Catalogs - repositioning Interlibrary Loan
   BARBARA PREECE and JOAN THOMPSON (Boston Library Consortium City and Country: Boston, Boston, MA, USA)

11.10-13.00

109. Knowledge Management Discussion Group

In this start-up meeting for a Discussion Group, the papers of the previous Open Session on Knowledge Management (see meeting 99) may be discussed further. Additionally some short reports on successful examples of implementing Knowledge Management will be presented, amongst others: 'Experiences with Knowledge Management in France' by JEAN-PHILIPPE ACCART (University of Grenoble and ENSSIP, Lyon, France. The Social Science Libraries Section will sponsor this Discussion Group.

11.30-13.00

110. Open Forum: Division Bibliographic Control - *SI*

Updating session with reports on activities on the Division and other related activities.

1. IFLA Core Activity for Universal Bibliographic Control and International MARC (UBCIM) - Review of activities 2000-2001
   MARIE-FRANCE PLASSARD, Programme Director, UBCIM
2. Section on Classification and Indexing; Review of activities, 2000-2001
   Section on Classification and Indexing Tätigkeitsbericht 2000-2001
   Sección de Clasificación e Indización - Informe de actividades, 2000-2001
   IA C. MCILWAINE (University College London, London, UK)
3. Rapport - Section de Catalogage
   Section on Cataloguing - Report of the Activities
   Секция по Каталогизации
   MARIA WITT (Sécrétaire de la Section Catalogage 1997-2001)
4. Section on Bibliography - Review of activities 2000-2001
   Section de bibliographie : Rapport d'activité 2000 - 2001
   JOHN D. BYRUM, Jr. (Secretary of the Section on Bibliography, Library of Congress, Washington, D. C. USA)

11.30-14.00

111. Library and Information Science Journals

'How LIS Journals create knowledge'

1. Journals and the shaping of disciplinary knowledge
   JOHN M. BUDD (School of Information Science and Learning Technologies, University of Missouri,

Columbia, USA)

2. Knowledge creation from Australasian LIS Journals: a content analysis
   D.G. DORNER (Lecturer, School of Communications and Information Management, Victoria University of Wellington, Wellington, New Zealand)
3. LIS Journals in the knowledge age
   EILEEN BREEN (Managing Editor, MCB University Press, Bradford, UK)

112. *Unallocated*

12.00-14.30

113. Reading

'Reading Research: an International Perspective'

1. Research about reading: an overview
   GREG BROOKS (Professorial Research Fellow, University of Sheffield, Sheffield, UK)
2. Reading research in Africa - a report
   GERTRUDE K. MULINDWA (Consultant, Uganda)
3. Reading research in Russia - a report
   VALERIA STELMAKH (Senior Researcher, Russian State Library, Moscow, Russian Federation)

13.00-14.00

113a. Reference Work SC II

13.15-14.45

114. Open Forum: Division of Regional Activities - *SI*

'Bridging the Digital Divide: Meeting the Challenge of the Knowledge age in Developing Countries'

1. Bridging the digital divide in South and Southeast Africa: co-operative digitization projects
   DALE PETERS (Project Manager, National Pilot Digital Imaging Project, University of Natal, Durban, South Africa)
2. The promise of the global digital library in a time of a growing digital divide
   CHING-CHIH CHEN (Professor, Graduate School of Library and Information Science, Simmons College, Boston, USA)
3. The digital divide: the view from Latin America and the Caribbean
   ADOLFO RODRIGUEZ (Professor, Universidad Nacional Autonoma de Mexico, Mexico)

13.15-14.15

115. Guest Lecture I - *SI*

'What is Knowledge Management and why is it Important?'

LAURENCE PRUSAK

Mr. Prusak is Executive Director of the Institute for Knowledge Management, which is a part of IBM. He is recognized internationally for helping organizations leverage and optimize their information and knowledge resources.

13.30-16.00

115a. Education and Training

'Parameters of Knowledge Management within Library/Information Science Education'

Moderator: Susan Lazinger

1. Perspectives on education for knowledge management
   ABDUS SATTAR CHAUDRY and SUSAN ELLEN HIGGINS (Division of Information Studies, School of Computer Engineering, Nanyang Technological University, Singapore)
2. A bounded or unbounded universe? Knowledge management in postgraduate LIS education
   MARK BROGAN, PHILIP HINGSTON and VICKY WILSON (School of Computer and Information Science, Edith Cowan University, Mount Lawley, Australia)
3. Knowledge management: opportunities of IS graduates
   ANNE MORRIS (Reader in Information Processing, Department of Information Science, Loughborough University, UK)

14.10-15.00

116. Industry Updates III

Three Technologies to support the 3 "P"s of Library Systems: Unicode for Pervasiveness, RFID for Productivity and Skin Technology for Personalization
VINOD CHACHRA (President, VTLS Inc., Blacksburg, United States)

14.10-15.00

117. Information Coordinators Meeting

118. *Unallocated*

16.00-18.00

119. Opening and Plenary Session - *SI*

Keynote Speaker: JONATHAN KOZOL

A graduate of Harvard University and a Rhodes Scholar, Kozol has championed the rights of the poor and underserved in the United States, and the need for society to provide equal access to education and resources. He is the author of award-winning books "Death at An Early Age", "Savage Inequalities: Children in American Schools", and "Amazing Grace: The Lives of Children and Conscience of a Nation."

Evening

120. Reception at Boston Public Library

Tuesday, August 21, 2001

08.30-11.00

121. Audiovisual and Multimedia with Information Technology - *SI*

'New Technologies for Access to Moving Images'

1. Moving Images and Cultural Heritage in Scotland
   BRUCE ROYAN (SCRAN, Scottish Cultural Resources Access Network, UK)
2. DIVA - the digital video and audio archive of the Karlsruhe University Library
   RÉGINE TOBIAS and UDO WILLKE (Karlsruhe University, Germany
   These papers will be followed by a presentation of the first working draft of the 'Guidelines for audiovisual and multimedia materials in libraries' by Joëlle Garcia (Bibliothèque nationale, France, Chair of the Section on Audiovisual and Multimedia)

08.30-11.00

122. Library and Research Services for Parliaments - *SI*

'Parliamentary and Legislative electronic libraries in co-operation'

1. Toward the electronic parliamentary library in the context of the European Union
   La bibliothèque parlementaire électronique dans le contexte de l'Union européenne
   Aufbau einer elektronischen Parlamentsbibliothek für die Europäische Union
   На пути к электронной парламентской библиотеке в условиях Европейского сообщества
   Hacia la biblioteca parlamentaria electrónica en el contexto de la Unión Europea
   DICK TOORNSTRA (Director of Parliamentary Documentation and International Cooperation, European Union, Brussels, Belgium)
2. The web-site library and its parliamentary information and dissemination services: case study of the Parliamentary Library of Taipei, Taiwan, China
   Bibliothèque sur le Web et services parlementaires d'information et de diffusion: Étude de cas de la bibliothèque du Parlement de Taipei, Taiwan, Chine
   Die Website-Bibliothek und ihre Informationsdienste für das Parlament: Eine Fallstudie der Parlamentsbibliothek von Taipei, Taiwan, China
   Библиотека на базе сайта в Интернете и её услуги по информированию и распространению сведений о парламенте: исследование на конкретном примере библиотеки парламента Тайваня (г. Тайбэй, Китай)
   La biblioteca virtual y sus servicios parlamentarios de información y difusión: Estudio de caso de la Biblioteca Parlamentaria de Taipei, Taiwán, China
   KARL MIN KU (Head, Library and Information Service, Legislative Yuna, Taipei, Taiwan, China)
3. Making a difference in the knowledge age at the New Zealand Parliamentary Library
   Faire la différence à l'ère du savoir à la Bibliothèque parlementaire de Nouvelle-Zélande
   Die neuseeländische Parlamentsbibliothek im Wissenszeitalter
   Совершенствование работы Парламентской библиотеки Новой Зеландии в век знаний:
   Innovación en la era del conocimiento en la Biblioteca Parlamentaria de Nueva Zelandia
   MOIRA FRASER (Librarian, Parliament of New Zealand, Wellington, New Zealand)

08.30-11.00

123. Rare Books and Manuscripts

'The History of Printing in the Americas'

1. El Patrimonio Bibliográfico de México
   Looking after the bibliographic heritage of Mexico
   ROSA MARIA FERNANDEZ DE ZAMORA (Biblioteca Nacional de Mexico UNAM IIIB, D.F., Mexico)
2. A new world of words: Amerindian languages in the Colonial World
   DANIEL J. SLIVE (Rare Books Librarian, UCLA Young Research Library, Los Angeles, USA)
3. The introduction and early use of Lithography in the United States
   GEORGIA BARNHILL (Andrew W. Mellon Curator of Graphic Arts, American Antiquarian Society, USA)

124. *Unallocated*

08.30-11.00

125. Open Forum: Division of Libraries Serving the General Public

'Achievements: Libraries Change Lives'

1. Achievers: from blindness to insight
   DICK TUCKER (Project Coordinator, FORCE Foundation, The Hague, Netherlands)
2. TBA
   ALICE HAGEMEYER (in sign-language)
3. TBA

08.30-11.00

126. User Education

'International Guidelines for User Education Across Continents'

1. Information Literacy Standards for Higher Education: an international perspective
   Des normes pour les compétences dans l'usage de l'information dans l'enseignement supérieur: une perspective internationale
   LOANNE SNAVELY (Head of Instructional Programs, Pennsylvania State University, Pennsylvania, USA)
2. Information literacy and academic libraries: the SCONUL approach (UK/Ireland)
   Aptitudes para el acceso y uso de la información en la enseñanza superior : la postura de SCONUL
   TOBY BAINTON (Standing Conference of National and University Libraries, UK)
3. Customer or refined student? Reflections on the "customer " metaphor in the academic environment and the new pedagogical challenge to the libraries and librarians
   CHRISTINA TOVOTE (Head of User Education, Malmö University, Malmö, Sweden)
4. Difficulties and new approaches in user education in Germany
   Schwierigkeiten und neue Ansätze der Benutzerschulung in Deutschland
   Difficultés et nouvelles approches de la formation de l'usager en Allemagne
   BENNO HOMANN (University of Heidelberg, Heidelberg, Germany)
5. User Education: training the librarians to use new technologies in the developing countries
   HANS RAJ CHOPRA (Reader, Department of Library and Information Science, Panjab University, India)

8:30-11:00

126a. Library Buildings and Equipment

'Libraries in the 21st Century: Key Issues'

1. New Public Libraries in Portugal
   FERNANDA EUNICE FIGUEIREDO
2. The Construction of Infrastructure for Library's Digital Document Telecommunications
   YING CHANGXING (Librarian and Deputy Director of Zhejiang Library, Hangzhou, China) and
   LIN ZUZAO (Senior Research Librarian of Zhejiang Library, Former Deputy Director of Zhejiang Library, Hangzhou, China)
3. TBA

09.00-09.30

127. Bill & Melinda Gates Foundation 2001 Access to Learning Award Announcement

Off-site: *Boston Public Library, Historic McKim Building, Abbey Room Copley Square, 700 Boylston Street (use Dartmouth Street entrance of the McKim Building)*

10.15-11.15

128. Press Conference

IFLA/OCLC Early Career Development Fellowship

The results of the 2001 Fellowships will be reported on and the winners of the 2002 Fellowships will be announced at this Press Conference.

11.15-12.15

129. Guest Lecture II - *SI*

JAMES BILLINGTON

James Billington has been the Librarian of Congress since 1987. He has championed the Library's extension of its services to all Americans through the National Digital Library Program and its "American Memory" website. He has worked to collaborate with the private sector to support the Library and its initiatives.

130. *Unallocated*

12.00-14.00

131. Poster Sessions

1. The Science and Technology Information Network of the Philippines (ScINET-PHIL) Experience
   ROSIE R. ALMOCERA (Science and Technology Institute, Metro Manilla, Philippines)
2. Development of a Cooperative Resource Sharing Agreement in the Country of Lebanon
   LESLIE ALTER HAGE (Notre Dame University-Louaize, Zouk Mosbeh, Lebanon)
3. MINERVA: The Web Preservation Project of the Library of Congress
   CASSY AMMEN (Library of Congress, Washington, USA)
4. TEEAL (The Essential Electronic Agricultural Library): Making a Difference in the Developing World
   MARY ANDERSON OCHS (Albert R. Mann Library, Cornell University, Ithaca, USA)
5. ASTM Paper Aging Research Program
   R. BRUCE ARNOLD (R.B. Arnold Associates Inc, West Chester, USA)
6. Books for All: An International Project of IFLA and UNESCO Supporting Children's Libraries in Developing Countries

LIOBA BETTEN (BOOKS FOR ALL, Munich, Germany)

7. New Models for Reference Service
   KAY ANN CASSELL (New York Public Library, NewYork, USA)
8. Learning Styles of International Students - Effective Tools for Bibliographic Instruction
   CALMER CHATTOO (University at Buffalo Law Library, Buffalo, USA)br
9. International and Comparative Information Services: Issues and Trends Relevant to the Development of a Global Information Society
   MARIA T. CHAVEZ-HERNANDEZ (Florida State University Tallahassee, USA)
10. Find-It! Illinois: Ramp-up to Find-It! America
    ANNE CRAIG (Illinois State Library, Springfield, USA)
11. Distance Education: How Librarians and Library School Education Position Themselves?
    ARIF DAGLI (Tallahassee, USA)
12. The Campaign for America's Libraries@your library
    DEBORAH DAVIS and PATRICIA GLASS SCHUMAN (American Library Association, Chicago, USA)
13. Hand in Hand
    BETSY DIAMANT-COHEN (Enoch Pratt Free Library at Port Discovery, Baltimore, USA),
    CAROL SANDLER (Strong Museum, Rochester, USA) and
    DINA SHERMAN (Brooklyn Children's Museum, Brooklyn, USA)
14. Le développement de l'Afrique par la Promotion de l'Information Technologique: le Centre Régional Africain de Technologie
    BALLA DIOP (Centre Régional Africain de Technology (CRAT), Dakar, Sénégal)
15. Collections Conservation Decision Making is Key
    JEANNE DREWES (Michigan State University Libraries, East Lansing, USA)
16. Information Literacy Education: the Case Study of Escola Politecnica da Universidade de Sao Paulo - Brazil
    ELISABETH A. DUDZIAK, MARIA A. GABRIEL and MARIA CHRISTINA O. VILLELA (Escola Politecnica da USP, Sao Paulo, Brazil)
17. Toy Libraries Contribute to Child Development and Early Learning
    MARIE FAULKNER (Northwood, U.K.)
18. How did you find that?!: The Odyssey of NOAH's Online Genetics Information for Patients
    PATRICIA E. GALLAGHER (New York Academy of Medicine, New York, USA)
19. La Instrucción Bibliográfica para los Estudiantes de Nuevo Ingreso: Como ensenar la Biblioteca a los nuevos Estudiantes y que estos aprendan mientras juegan dentro de la misma
    LUIS MARIO GALLAND ORTIZ (Universidad de las Americas-Puebla, Puebla, Mexico)
20. El Impacto de la Biblioteca Electrónica en el Comportamiento del Investigador y en la Actuación del Profesional de la Información: La Experiencia de la Biblioteca Universitaria Brasilena
    VALERIA dos S. GOUVEIA MARTINS, MARIA ALICE REBELLO DO NASCIMENTO and
    MONTSERRAT URPI CAMARA (UNICAMP, Sao Paulo, Brazil)
21. Grey Literature in the Health Science Area at the Federal University of Maranhao (UFMA): Research Project
    MARIA DO ROSÁRIO GUIMARAES ALMEIDA (Universidade Federal do Maranhao, Brazil)
22. Electronic Collection Development via NetLibrary
    SUZANNE D. GYESZLY (Policy Sciences & Economics Library Texas. USA)
23. Licensing Information for Librarians in Central and Eastern Europe - CELIP Project
    TUULA HAAVISTO (Central and Eastern European Licensing Information Platform, Helsinki, Finland)
24. NORDINFO: Nordic Council for Scientific Information 25th Anniversary
    SIGRUN KLARA HANNESDOTTIR (NORDINFO, Helsinki, Finland)
25. International Friends of the Alexandria Library
    ALAN HOPKINSON (Middlesex University, London, U.K.)
26. Towards the Construction of Benchmarks for Information Literacy: an Evaluation of Inform. Competence among Graduate Students at the University of Cape Town
    KARIN JAGER and MARY NASSIMBENI (University of Cape Town, Rondebosch, South Africa)
27. RGU.COM - Developing a Virtual Campus for LIS Education from Print Based Distance Learning to Knowledge Management on the Internet
    IAN M. JOHNSON (The Robert Gordon University, Aberdeen, U.K.)

28. Providing Web Technology Basics to Patrons
DINA KANABAR (Westford, USA)
29. Bridging the Gap: Experience of the IGNOU in Providing Library Services to the Distance Learners
UMA KANJILAL and NEELA JAGANNATHAN (Indira Gandhi National Open University, New Delhi, India)
30. A Web-based Library Survey Questionnaire: Pros and Cons
VICTORIA T. KOK, C. EDMONDS ROSS and ELEANOR G. GARRISON (Virginia Polytechnic Institute and State University Blacksburg, USA)
31. Virtual Libraries in the New Millenium: an African Prespective
RANDY EMMANUEL KOMMEY (Volta River Authority, Accra, Ghana)
32. To be announced
SVETLANA KURMASHEVA (National Library of Kyrgyzstan, Kyrgyzstan, Russian Federation)
33. Principles of Sustainable Design Applied to Library Buildings
ALEXANDER P. LAMIS (Robert A.M. Stern Architects, New York, USA
34. Strategic and Systematical Development of Competencies and Negotiating Vages/salaries among Danish Librarians
JESPER LAURSEN (Danish Union of Librarians, Frederiksberg, Denmark)
35. Creation of Electronic Document and Information Supply Association in Russia
OLGA L. LAVRIK (State Public Library of Scientific and Technical Literature of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russian Federation) and
VICTOR A. GLOUKHOV (Institute on Scientific Information for Social Sciences of the Russian Academy of Sciences, Moscow, Russian Federation)
36. MALIBU: Managing the Hybrid Library for the Benefit of Users - Integration, Integration, Integration!
ANN LEES (The Library King's College, London, UK)
37. Ready for Reference. Online! Anytime!@your library TM
MARY-CAROL LINDBLOOM (Alliance Library System, Quincy, USA)
38. The Center for Research Libraries: Building International Collections through Cooperation
BEVERLY P. LYNCH (Center for Research Libraries, Chicago, USA)
39. The Teaching Levels of Reference Service: A Statistical Representation
PULINE MANAKA and ROUMIANA KATZARKOV (University of California, Irvine, USA)
40. Pacticipative Management and Technological Resources in University Libraries
RAIMUNDA RAMOS MARINHO (UFMA, Sao Luiz, Brazil)
41. Bridging Library Communities: a Project from Swiss Libraries/Un Lien entre les Bibliothèques du Monde Entier
DANIELLE MINCIO ((Bibliothèque cantonale et universitaire, Lausanne, Switzerland) and DAISY McADAM (Bibliothèque de Faculté des sciences économiques et sociales, Genève, Switzerland)
42. Teaching and Learning Cultural Competency in Medical School: Medical Faculty - Librarian Collaboration
OBIANUJU MOLLEL (Whitney Medical Library, New Haven USA)
43. Early English Books Online and the EEBO Text Creation Partnership: Creating Searchable Digital Versions of Early English Books
HILLARY NUNN (University of Michigan, Ann Arbor, USA)
44. When Old Things become new Again: Strategies for Change in Libraries and Archives
H. INCI ÖNAL (Hacettepe University, Ankara, Turkey)
45. The Virtual Library as the Finest Tool for the ILL Services: Ten Years Work to Improve the End-user Satisfaction in a Small Country
MARIE THÉRÈSE PAQUES-LEDENT (Université de Liège, Liège, Belgium)
46. The Renardus Project and the Australian Subject Gateways Forum: Collaboration between Subject Gateways in Europe and Australia
MARIANNE PEEREBOOM (Royal Library, The Hague, Netherlands)
47. The Bibliographical Citation in Dissertation of Master Degree in PUC CAMP, the year of 1995 and 1999, Exploratory Study in the Area of Librarianship and Information Science
MARIA FÁTIMA PEREIRA (Sao Paulo, Brazil)
48. Celebrating a New Century that Celebrates Diversity: Positive Language as the Key to Making a Positive Difference in the Knowledge Age
ELLEN PERLOW (Texas Woman's University, Denton, USA)

49. RECIARIA: Argentine Information Networks
GRACIELA PERRONE (Reciaria-Biblioteca Nacional de Maestros, Buenos Aires, Argentina)
50. Regional Alliance for Preservation (RAP): A Model Cooperative Network
VIGILIA RAWNSLEY (Conservation Center for Art and Historic Artifacts, Philadelphia, USA)
51. Desarrollo de un Sistema de Información Hipermedial para el Acceso a Legislación
JESÚS ROBLEDANO ARILLO (Universidad Carlos III de Madrid, Madrid, Spain)
52. CLS Online: Come Join the Fun!
THERESA A. ROSS EMBREY (Chicago Library System, Chicago, USA)
53. Aging and Verbal Creativity
ODD SAETRE (Flaktveit, Norway)
54. Metadatos para Imágenes en Internet
SAMIRA SAMBAINO (Montevideo, Uruguay)
55. Advancement of Librarianship Programme
BIRGITTA SANDELL (ALP Office, Uppsala, Sweden)
56. ALA's Sister Library Program - Promoting a Global Community of Libraries in this Knowledge Age
MARY A. SHERMAN (Pioneer Library System, Norman, USA)
57. Developing Intellectual Property Policy for Digital Library (from the reference librarian's perspective)
TANYA SHKOLNIKOV (HSC Library, Suny at Stony Brook, USA)
58. Por que lo hacemos asi?
ANN MONTGOMERY SMITH (University of Massachusetts-Dartmouth, North Dartmouth, USA)
59. Multimedia Database of Engineering Documents
ATUL Kumar SRIVASTAVA and Pankaj Srivastava (Technical Business Group Library Oil and Natural Gas Corporation, Mumbai, India)
60. Providing Consumer Health Information to Asian Americans - A Collaborative Model
MARSHA SULLIVAN and DEBORAH HALSTED (Houston Academy of Medicine, Houston, USA)
61. Serving Multi-Type Librarians in the World's the most Devise City - Metropolitan New York Library Council's Practice
XUEMAO WANG and DOTTIE HIEBING (METRO, New York, USA)
62. Inform the World Volunteers: Advocates for Sustainable Rural Library Development
LAURA WENDELL (World Library Partnership, Bahama, USA)
63. Translated Children's Books from other Languages into English: A Study of Outstanding Books in the USA, 1990 - 2000
MAUREEN WHITE and NANCY BLUEMEL (University of Houston-Clear Lake, Abilene, USA)
64. Library of the Future in a Web-based Internet Environment
YANG ZHIPING and ARTHUR W. HAFNER (Chengdu Library of the Chinese Academy of Sciences, Chengdu, China Seton Hall University, South Orange, USA)
65. The Pilot of the Latvian Cultural School under the EC Leonardo da Vinci Programme "Public Library Management and new Information Technologies"
AUSMA ZOLDNERE (Latvijas Kulturas Skola, Riga, Latvija)
66. Slovenian National Library has finished its Retrospective Conversion
MAJA ZUMER (National and University Library, Ljubljana, Slovenia)

12.30-13.20

132. Industry Updates IV

VubisSm@rt - Smart Technology for Smart Libraries
ERIC VAN LUBEEK (General Manager Library Division, Geac Benelux BV, 's-Hertogenbosch, Netherlands)

12.30-15.00

133. Bibliography

'Bibliography: indispensable or redundant'

1. Bibliographic control or chaos: an agenda for national bibliographic services in the 21st century
   Библиографический учет или хаос: на повестке дня библиографич. служб 21 столетия
   MICHAEL GORMAN (Dean, Library Services, California State University, Fresno, USA)
2. Selektion von Online-Publikationen für Nationalbibliographien
   Global publishing and national heritage: Selection of Internet resources for national bibliographies
   Глобальное издательство и национальное наследие: отбор Интернет-ресурсов для национальных библиографий
   CLAUDIA WERNER (Head, Central Bibliographic Services, Die Deutsche Bibliothek, Frankfurt am Main, Germany)
3. The New Books Project: a prototype for re-inventing the Cataloguing-in-Publication program to meet the needs for publishers, libraries and readers in the 21st century
   JOHN CELLI (Head, CIP Division, Library of Congress, Washington, USA)
4. The Canadian National Bibliography: 50 years of continuity and change
   La bibliographie nationale du Canada
   50-ю годовщину Canadiana (Канадианы). национальной библиографии Канады
   DAVID BALATTI (Director, Bibliographic Services, National Library of Canada, Ottawa, Canada)

12.30-15.00

134. Serial Publications

'From Bibliographic Access to Content with a Click of a Mouse'

1. CrossRef: a Publisher's Perspective
   KAREN HUNTER (Elsevier US, USA)
2. TBA KNUT DORN (Otto Harrassowitz Publishers and Booksellers, Wiesbaden, Germany)
3. From Bibliographic Database to Content - New Aspects for Library Work, New Aspects for Research, Education and Information Provision
   DIANN RUSCH-FEJA (Director, Library, Max-Planck-Institut für Bildungsforschung, Berlin, Germany)

12.30-15.00

135. Statistics

'Statistics in the Knowledge Age: New Measures and Assessments'

1. The association of Research Libraries Statistics and Measurements Program: From Descriptive Data to Performance Measures
   Le programme statistique de l'association des bibliothèques de recherche (ARL): des statistiques descriptives à la mesure de la performance
   Das Statistik- und Messprogramm der „Association of Research Libraries": Von beschreibenden Daten zu Leistungsmessungen
   Статистика и программа измерений Ассоциации научных библиотек
   El programa de Estadísticas y Evaluación de la Asociación de Bibliotecas de Investigación: desde los datos descriptivos hacia las medidas de rendimiento
   JULIA C. BLIXRUD (Director of Information Services, Association of Research Libraries, Washington, USA)
2. Russian and CIS Library Internet Service: an Analysis of WWW-server Development
   Le service Internet de la Bibliothèque de Russie et de la CEI : une analyse du développement du site web
   Статистический Анализ Web-Серверов Библиотек России
   El servicio de Internet en las bibliotecas de Rusia y la CIS:análisis del desarrollo de los servidores www

YAKOV SHRAIBERG (Deputy Director, Russian National Public Library for Science and Technology, Moscow, Russian Federation)

3. Managing Service Quality with the Balanced Scorecard
   Gérer la qualité grâce à la méthode « Balanced Scorecard » (Tableau de Bord Prospectif)
   Управление качеством обслуживания с балансовой отчетной картой
   La gestión de la calidad del servicio con la Ficha equilibrada de resultados
   ROSWITHA POLL (Chief Librarian, University and Regional Library, Münster, Germany)

12.30-15.00

136. Public Libraries - *SI*

'Public Libraries: Making a Difference in the Knowledge Age'

1. Public library services in Boston
   TBA
2. The IFLA/UNESCO Public Library Guidelines
   PHILIP GILL (Guidelines Project Coordinator, Coventry, UK)
3. A hassle-free library experience - the use of Radio Frequency Tagging in Singapore libraries
   NGIAN LEK CHOH (Senior Director, Library Services, National Library Board, Singapore)
4. UNET-UNESCO Model Library Project International Evaluation
   KERSTIN HASSNER (Director, Department of Administrative Services, Culture and Libraries, Ljusdals, Sweden)
5. Use of Public Library Internet Terminals: A Transaction Log Analysis
   ANN CURRY (Associate Professor, Chair of the MLIS Program, University of British Columbia, Canada)
6. The public library and lifelong learning project
   BRITT MARIE HÄGGSTRÖM (President, DIK Association, Nacka Sweden)
7. Copyright and Licensing - Hot issues for public libraries
   FRODE BAKKEN (President, Norwegian Library Association)
8. Library and Museums-Cooperative Programming for Children
   BETSY DIAMANT-COHEN (Manager, Exploration Centre, Enoch Pratt Free Public Library, Baltimore, MD, USA)
9. Documenting the Public Library's Value
   MARGARET SCRATCH (Deputy Director, Southern Ontario Library Services, Ontario, Canada)

12.30-15.00

137. Management of Library Associations - *SI*

'Library Association Twinning'

1. Can "twinning" be applied effectively to small Library Associations?
   NORMA AMENU-KPODO (Executive Secretary, Commonwealth Library Association, Kingston, Jamaica)
2. Puerto Rican Library Associations: one country's twinning opportunities
   LOUISA VIGO CEPEDA (Professor, University of Puerto Rico, Graduate School of Information Sciences and Technologies, San Juan, Puerto Rico)
3. How large library associations can help small library associations in a twinning relationship
   WILLIAM GORDON (Executive Director, American Library Association, Chicago, United States)

138/139. *Unallocated*

13.00-15.45

140. Executive Board II

15.30-18.00

141. Acquisition and Collection Development

'Electronic Collections: Evaluating their ongoing Need and Utility for Library Users'

1. Evaluating digital resources in an academic consortium: from theory to practice
   ELHANAN ADLER (Director, Israel Center for Digital Information Services - MALMAD, Jerusalem, Israel)
2. Use of electronic journals in OhioLINK'S Electronic Journal Center
   TOM SANVILLE (Executive Director, Ohio Library and Information Network - Ohio Link, Columbus, Ohio USA)
3. The eIFL - electronic Information for Libraries Projects: a global initiative of the Soros Foundation Network
   eIFL – Электронная Информация для Библиотек Всемирная Инициатива Сети Фордов Сороса
   BLAZEJ FERET (Deputy Director, Main Library, Technical University of Lodz, Lodz, Poland)
   MICHAEL KAY (Director, eIFL project, Open Society Institute, Budapest, Hungary)
   ANNA MARIA BALOGH (eIFL Project Co-ordinator, Open Society Institute, Budapest, Hungary)
   PETER SZANTO (Library Director, National Technical Information Centre and Library, Budapest, Hungary)
   SAM BROOKS (Senior Vice President, Sales and Marketing, EBSCO Publishing Co., Boston, USA)
4. How can evaluation get us to the heart of learning in the electronic age?
   ¿Cómo puede la evaluación introducirnos en el corazón de la enseñanza en la era electrónica?
   ALICE WISE (UK Joint Information Systems Committee, London, UK)

15.30-18.00

142. Classification and Indexing - *SI*

'Education and Knowledge Organization'

1. Teaching classification in the 21st century.
   PAT OYLER (Professor, Simmons College, Boston, USA)
2. Wissensorganisation und Information Retrieval im Wandel Konzepte für die Ausbildung in Deutschland
   Knowledge organization and information retrieval in times of change - concepts for education in Germany
   Organisation de la connaissance et recherche documentaire en période de changement - Concepts pour l'enseignement en Allemagne
   WINFRIED GÖDERT (Profession, Fachhochschule Köln, Cologne, Germany)
3. Teaching classification to fit a modern and sustainable LIS curriculum: the case of Croatia
   L'enseignement de la classification au sein d'un cursus moderne et stable en bibliothéconomie et sciences de l'information : l'exemple de la Croatie
   Klassifikation als Unterrichtsfach innerhalb einer modernen und nachhaltigen Ausbildung in Bibliotheks- und Informationswissenschaft: das Beispiel Kroatien
   Преподавание классификации в соответствии с современной программой курса библиотековедения и информатики: опыт Хорватии
   La enseñanza de la clasificación documental en el marco de un plan de estudios moderno y viable: el caso de Croacia
   AIDA SLAVIC (Lecturer, University of Zagreb, Zagreb, Croatia)
4. Enseñanza de la recuperacion y acceso por tema en las Escuelas de Bibliotecologia Mexicanas

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Teaching of subject access and retrieval at Mexican LIS Schools
L'enseignement de la recherche documentaire et de l'accès par sujet dans les écoles de bibliothéconomie mexicaines
Unterricht über Thematische Suche und Retrieval an LIS Schulen in Mexiko
FILIBERTO FELÍPE MARTINEZ ARELLANO (Coordinador del Colegio de Bibliotecología, Universidad Nacional Autonóma de México, Mexico)

15.30-18.00

143. Regional Activities: Africa - *SI*

'Africa in the Knowledge Age: Status and Role of National Information Policy'

1. The imperatives of Challenges for Africa in the Knowledge Age: Status and Role of National Information Policy
   BENEDICTA OLADELE (Librarian, National Institute for Policy and Strategic Studies, Kuri, Plateau State, Nigeria)
2. Skill and competencies for digital information management in Africa
   GEORGE GUNDU SHIBANDA (Senior Assistant Librarian, Moi University Library, Eldoret, Kenya)

15.30-18.00

144. Libraries for the Blind with Copyright and Other Legal Matters

'Rights Management in the age of digital content: enhancing access for print handicapped users'

1. Digital rights management: threat or opportunity in the digital age
   HIROSHI KAWAMURA (Director, Japanese society for Rehabilitation of Persons with Disabilities, Japan)
2. Licence fees: barrier or opportunity for access to electronic content?
   GRAHAM CORNISH (Director, UAP Core Activity, British Library, Boston Spa, UK)
3. WIPO - Advancing Access to Information for Print Disabled People
   Organisation mondiale de la propriété intellectuelle (OMPI) - Progrès dans l'accès à l'information des handicapés visuels
   DAVID MANN (Royal National Institute for the Blind, UK)

15.30-18.00

145. Continuing Professional Education

'Delivering Lifelong Learning Across Space and Time: Three Models'

1. The ACRL/Harvard Leadership Institute: Academic and Research Libraries Enhancing Their Strategic Leadership Capacity in Higher Education
   MAUREEN SULLIVAN (Organizational Development Consultant, Annapolis, MD, USA)
2. Developing leaders for libraries: The Stanford-California State Library Institute on 21st Century librarianship experience
   ANN MARIE GOLD (Executive Director, Stanford-California State Library Institute on 21st Century Librarianship, Palo Alto, USA)
3. Providing Continuing Education for New Technologies; The Gates Program
   CAROL ERICKSON (The Gates Foundation, Seattle, USA)

146. *Unallocated*

15.30-18.00

147. Science and Technology Libraries

'Speaking differently: transitions in scientific communication'

Moderator: JULIA GELFAND (University of California *Irvine, Irvine, USA)

1. Making good science look good
   FELICE FRANKEL (Research Scientist, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, USA)
2. Entrepreneurs as social value: public discourse in the sciences
   MICHAEL JENSEN (Director of Publishing Technologies, National Academy Press, Washington, USA)
3. The digital dilemma: intellectual property in the information age
   RANDALL DAVIS (Professor, Massachusetts Institute of Technology, Cambridge, USA)

15.30-18.00

147a. Mobile Libraries

'Advancing Knowledge for Societal Productivity through Mobile Libraries: Motorized and Non-Motorized Initiatives'

1. Final Report on the Regional Seminar on Mobile Library Services in Indochina: From February 2001 and into the Future
   PENSRI GUAYSUWAN (Manager, IFLA Regional Office for Asia and Oceania)
2. Mahasarakham University Leading Libraries in Mobile Library Services
   SUJIN BUTDISUWAN (Director/Assistant Professor, Academic Resource Center, of Mahasarakham University, Thailand)
3. Mobile Library Development in Mayotte - Mamoudzou Island; the Indian Ocean
   MIREILLE FAYRET
4. Programmatic View of Mobile Libraries in the United States
   ERNEST DIMATTIA (President of The Ferguson Library Connecticut, USA)
5. Mobile Libraries in Vietnam in 21st century
   PHAM THE KHANG (Director, The National Library of Vietnam, Vietnam)
6. World-wide Survey of Mobile Libraries
   THELMA TATE (Chair of the Round Table on Mobile Libraries)

Evening

148. Cultural Reception at Museum of Science

Wednesday, August 22, 2001

All day - Off Site

Conference of Directors of National Libraries (CDNL)
(On Invitation Only)

08.30-11.00

149. Library History - *SI*

'The Boston Years of Early Library Profession Leaders'

1. Justin Winsor, 1831-1897, at Boston Public Library and Harvard
   KENNETH E. CARPENTER (Harvard University Library, Cambridge, USA)
2. Dewey in Boston: 1876-1883
   WAYNE A. WIEGAND (Professor, University of Wisconsin, Madison, USA)
3. "Referred to the Librarian, with Power to Act": Herbert Putnam and the Boston Public Library
   JANE AIKIN (Researcher, U.S. National Endowment for the Humanities, Washington, USA)

08.30-10.55

150. Libraries Serving Disadvantaged Persons - *SI*

'Dyslexia: Challenges and Solutions for Your Library'

1. Advocating for the Millions - Protecting the Rights of People with Dyslexia
   J. THOMAS VIALL (Executive Director, International Dyslexia Association, Baltimore, USA)
2. New Technologies for People with Print Disabilities
   BART PISHA (Director of Research, CAST - Center for Applied Special Technology, Peabody, MA, USA)
3. People with Dyslexia Speak Out - Video Presentation
   J. THOMAS VIALL (Executive Director, International Dyslexia Association, Baltimore, USA)
4. Guidelines for Library Services to Persons with Dyslexia
   GYDA SKAT NIELSEN (Director of Outreach Services, Solleröd Public Libraries, Holte, Denmark)

08.30-11.00

151. Information Technology

'New Information and Communication Technologies for Libraries in the Knowledge Age'

1. Library quality reference meets the World Wide Web
   Qualitätssteigerung durch verteilten Auskunftsdienste im WWW
   DIANE KRESH (Director Reading Rooms, Library of Congress, Washington, USA)
2. Creating Knowledge Opportunities Through a Global Knowledge Learning Network
   GRACE KEMPSTER (The British Council, UK)
3. Open Archives Initiative
   CARL LAGOZE (Cornell University, USA)

08.30-11.00

152. Women's Issues

'Information Needs of Women'

1. Women's healthcare, censorship, and the library: problems, issues, questions
   NANCY KUHL (Reference and Instruction Librarian, Robert Frost Library, Amherst College, Amherst, USA)
2. Information needs of women: addressing diverse factors in the Indian context
   KALPANA DASGUPTA (Director, Central Secretariat Library, Government of India, New Delhi, India)

3. Partnerships with NGO's as a great opportunity for librarians for promotion of women's information needs in Croatia
   EDITA BACIC (Chief Librarian, Faculty of Law, University of Split, Split, Croatia)

08.30-11.00

152a. Cataloguing

'Positioning Cataloguing for the Future'

1. L'impact du modèle FRBR sur les révisions à venir des ISBD: un défi pour la Section de Catalogage de l'IFLA
   The impact of the FRBR model on the future revisions of the ISBDs: a challenge for the IFA Section on Cataloguing
   Die Auswirkungen des FRBR Modells auf die zukünftigen Revisionen des ISBD : Eine Herausforderung für die Sektion Katalogisierung der IFLA
   El impacto del modelo FRBR en las revisiones futuras de las ISBD: un challenge para la Sección de Catalogación de la IFLA
   PATRICK LE BOEUF (Service de Normalisation Documentaire, Bibliothèque nationale de France, Paris, France)
2. Progress on the Multilingual Dictionary of Cataloguing Terms and Concepts
   Avancement des travaux sur l'établissement d'un Dictionnaire multilingue des termes et concepts de catalogage
   Erste Schritte zu einem multilingualen Wörterbuch für Katalogisierungsbegriffe
   Работа по созданию многоязычного словаря терминов и понятий, используемых в каталогизации
   Progreso del Diccionario multilingüe de términos y conceptos de catalogación
   MONIKA MUENNICH (Senior Cataloguer, Universitäts Bibliothek, Heidelberg, Germany)
3. Spécifications fonctionnelles et numérotation internationale des notices d'autorité (FRANAR): jusqu'où le contrôle d'autorité peut-il être secondé par la technique ?
   Functional Requirements and Numbering of Authority Records (FRANAR): to what extent authority control can be supported by technical means?
   Funktionale Anforderungen an bibliographische Datensätze und ein internationales Nummernsystem für Normdaten: wie weit kann Normierung durch Technik unterstützt werden?
   Функциональные требования и нумерация авторитетных/нормативных записей: до какой степени авторитетный/нормативный контроль может обеспечиваться техническими средствами?
   FRANÇOISE BOURDON (Service de Normalisation Documentaire, Bibliothèque nationale de France, Paris, France)
4. A Virtual International Authority File
   Un fichier d'autorité international virtuel
   Eine virtuelle internationale Normdatei
   Виртуальный международный авторитетный файл
   Un fichero de autoridades virtual
   BARBARA B. TILLETT (Director, Integrated Library System Program Office, Washington, USA)

08.30-17.00

153. EC ROTNAC (Division Room)

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09.00-10.00

154. Press Conference

Public Library Guidelines
The complete revised edition of the IFLA/UNESCO Public Library Guidelines will be presented during this session.

09.00-10.30

155. Meeting with National Association Members

09.00-17.00

156. Parliamentary Library Management Workshop (By invitation only) - **Off-site**

1. Managing the political environment Case studies and discussion on the Information and Research Services in some parliaments
2. Change management and the selection of good staff The selection process including staff profile, interviews and the other ways of testing the competency and suitability of staff
3. Managerial decision-making Establishment of policies related to library employment and collection development. Performance indicators as a way of ensuring high quality services.
4. Towards the electronic parliamentary library What can be done with limited resources: case studies
5. Informing the public about parliament The role of parliamentary libraries and information services in the Internet presentation of parliaments
6. Parliamentary library committees The functions of Library Committees and their impact on the operation of parliamentary libraries.

11.00-12.25

157. Bill & Melinda Gates Foundation 2001 Access to Learning Award - *SI*

Grantee Presentation
The 2001 Bill & Melinda Gates Foundation's Access to Learning Award recipient, announced at an event on Tuesday morning, August 21, 2001, will present a description of the activities that it offers in the provision of public access computing and Internet access for the general public. The Access to Learning Award was first initiated in 2000, and will serve as an annual recognition of libraries, countries or organizations that are promoting free public access to technology in innovative and useful ways.

11.15-12.15

158. Guest Lecture III - *SI*

'Defending Balance in Intellectual Property Law: the Challenge for Librarians.'

PETER JASZI

Peter Jaszi is Professor of Law at the Washington College of Law at American University in Washington, D.C., and is acknowledged expert on intellectual property and copyright. He has been asked to present issues regarding intellectual property to the U.S. Congress on numerous occasions, and is concerned about ensuring access to information in the Knowledge Age.

11.30-14.30

159. Public Libraries

'Public Libraries and Telecentres - Companions or Competitioners?

Telecenters, telecottages, community technology centers, networked learning centers, digital clubhouses, cabanas públicas, sepaces numérisés, teletusgen, learning access places and public libraries are some of the names that are used for places that provide a range of activities and services that include access to information and communications technology for individual, social and economic development. For public libraries are these new creations companions or competitors?

Moderator: BARBARA CLUBB (City Librarian, Ottawa Public Library, Canada)

1. STEVE CISLER (Consultant on telecommunications and access issues in libraries, community organizations and public sites in the US and developing countries. San Hose, California)
2. CLARA BUDNIK (Director, Chilean Public Libraries, Chile)
3. DIANE BAYS (Manager, Policy Coordination and Special Projects, Community Access program, Industry Canada, Ottawa, Canada)
4. KATE SNOW (Director, Technology Center, Codman Square Health Center, Dorchester, USA)

12.00-14.00

160. Poster Sessions

See list under meeting 131

12.30-15.00

161. Biological and Medical Sciences Libraries with Information Technology

'Telehealth: Information Technology Advancing World Health'

1. TBA
   A.M. HOUSE (Lt. Governor, Province of Newfoundland, Canada)
2. TBA
   MICHAEL KIENZLE (Head, National Center for the Study of Rural Telemedicine, University of Iowa, Iowa, USA)
3. TBA
   MARY MOORE (Associate Program Coordinator, National Library of Medicine, Bethesda, USA)
4. TBA
   JAMES O'D McGEE (University of Oxford, Oxford, United Kingdom)

12.30-15.00

162. Librariesi for Children and Young Adults

'Children's Libraries and early years services'

1. Early literacy activities in the USA
   Actions menées aux USA pour lutter précocement contre l'illettrisme
   CAROLE FIORE (Library Program Specialist / Youth Services Consultant, State Library of Florida, Florida, USA)
2. Strong girls and bright colours- current themes in Swedish picture books
   Petites filles dynamiques et couleurs vives : thèmes récurrents dans les livres d'images suédois

ELISABETH LUNDGREN (Director, Department of Culture and Libraries, Kungalv, Sweden)

Panel Presentation on early years development in Europe and beyond

3. Early provision and services for pre-school children in Croatian public libraries
   Ressources et services proposés aux enfants d'âge préscolaire dans les bibliothèques publiques de la République Croate
   IVANKA STRICEVIC (Children's Librarian, Zagreb, Croatia)
4. Early years developments in France and beyond
   GENEVIEVE PATTE (Past-Director, Le Joie par les Livres, Paris, France)
5. Recent early years library initiatives in the United Kingdom
   JOHN DUNNE (Assistant County Librarian, Hampshire, UK)

12.30-15.00

163. Regional Activities: Asia and Oceania - *SI*

'Bridging the digital divide in Asia and Oceania'

1. Bridging the information gap between China and developed countries: compare library information services in China and in Sweden
   CHUNHUA YANG (Medical Library of Beijing, Beijing, China)
2. Bridging the digital divide in the island nations of Oceania
   JAYSHREE MAMTORA (Librarian, Pacific Information Centre, University of the South Pacific, Suva, Fiji)
3. The double edged sword : a brief comparison of it and Internet development in Malaysia and some few neighboring countries in the context of digital divide
   RAMLI ABDUL SAMAD (Head, Malaysiana/Archives Division, University Sains Malaysia, Penang, Malaysia)
4. Addressing the digital divide
   ROWENA CULLEN (School of Communications and Information Management, Victoria University of Wellington, Wellington, New Zealand)

12.30-15.00

164. University Libraries and other General Research Libraries - *SI*

'University Libraries in Partnership'

1. Introduction to the theme: university libraries and partnership
   Presentación del tema: las bibliotecas universitarias y las alianzas
   NIELS MARK (Library Director, State and University Library, Aarhus, Denmark)
2. Partnership among libraries
   BERNARD NAYLOR (President, The Library Association, London, UK)
3. Cooperative ventures between the university and the Library
   Пути сотрудничества университета и библиотеки
   Experiencias de cooperación entre la universidad y la biblioteca
   HANNELORE RADER (University Librarian, University of Louisville, Kentucky, USA)
4. Cooperation between libraries and suppliers
   GUNNAR SAHLIN (Librarian, Stockholm University Library, Stockholm, Sweden)

12.30-15.00

165. Library Theory and Research

'International Cooperation in Library and Information Science (LIS) Research: Making a Difference in the Knowledge Age'

1. An example of European cooperation on research in librarianship
   FRANCOISE BOURDON and ELISABETH FREYRE (Bibliothèque nationale de France, Paris, France)
2. Research and international technical cooperation programmes
   IAN M. JOHNSON (Head, School of Information and Media, The Robert Gordon University, Aberdeen, Scotland, UK)
3. Collaborative efforts in cross-country studies oninformation sharing infrastructure between China and the US: Introducing an international cooperative research method
   YAN QUAN LIU (Assistant Professor, Information and Library Science, Southern Connecticut State University, New Haven, CT, USA)

12.30-15.00

166. Geography and Map Libraries

'Where in the World? Accessing spatial data in the new millenium'

1. Geospatial Data Access: can we manage to shift?
   JAN SMITS (Map Curator, Koninklijke Bibliotheek, The Hague, Netherlands)
2. Naming the landscape: building the Connecticut Digital Gazetteer
   SCOTT R. MCEATHRON (Map Catalog/Liaison Librarian, University of Connecticut Libraries, Storrs, USA)
   PATRICK MCGLAMERY (Map Librarian, University of Connecticut Libraries, Storrs, USA)
   DONG-GUK SHIN (Professor, Computer Science and Engineering, University of Connecticut, Storrs, USA)
   BEN SMITH (Graduate Student, Natural Resources Management and Engineering, University of Connecticut , Storrs, USA)
   YUAN SU (Graduate Student, Computer Science and Engineering, University of Connecticut, Storrs, USA)
3. Geolibraries, the Global Spatial Data Infrastructure and Digital Earth: a time for map librarians to reflect upon the Moonshot
   JAMES BOXALL (Curator, Head Map and Geospatial Information Collection, Killan Library, Dalhousic University, Halifax, Canada)
4. You can look but don't touch: limits to access
   DAVID COBB (Curator, Harvard Map Collection, Harvard College Library, Cambridge, USA)

15.30-18.00

167. Copyright and Other Legal Matters Update Session

1. The Draft Hague Convention on Jurisdiction and Enforcement of Judgments in Civil and Commercial Cases - what it means for libraries
   Les implications pour les bibliothèques du projet de convention mondiale de La Haye sur la compétence internationale et les effets des jugements étrangers
   MIRIAM M. NISBET (Legislative Council, American Library Association, Washington, USA)
2. The European Council Directive on the harmonisation of certain aspects of Copyright and Related Rights in the Information Society: a brief overview
   La directive du Conseil européen sur l'harmonisation de certains aspects du droit d'auteur et des droits voisins dans la société de l'information : un bref aperçu

SANDY NORMAN (Copyright Consultant, St Albans, Herts, UK)

3. IFLA's Copyright Policy Statement: what it is and how to make good use of it
   JAMES G. NEAL (Dean of University Libraries, The Johns Hopkins University, Baltimore, USA)
4. IFLA's new Licensing Principles
   ANN OKERSON (Associate University Librarian, Yale University, New Haven, USA)

15.30-18.00

168. Preservation and Conservation with Information Technology

'Managing Digital Collections as Research Collections'

1. Shared challenges and in a networked cultural space
   Les collections numériques en bibliothèques de recherche : de nouvelles responsabilités partagées au sein du réseau culturel
   Электронные научные коллекции Общие проблемы и их положение в сетевом культурном пространстве
   DANIEL GREENSTEIN (Director, Digital Library Federation, Council on Library and Information Resources, Inc., Washington, USA)
2. Artifacts and Digital Collections
   De la préservation des documents, en tant que contenus et artefacts
   Об артефактах и сохранности
   STEPHEN G. NICHOLS (Chair, Task Force on the Role of the Artifact in Library Collections, Johns Hopkins University, Baltimore, USA)
3. Technical Metadata and Preservation Needs
   CATHERINE LUPOVICI (Head, Digital Library Department, Bibliothèque nationale de France, Paris, France)
4. Archiving Digital Collections
   TITIA VAN DER WERF (Coordinator of Electronic and Digital Archives, National Electronic Depository, Koninklijke Bibliotheek, The Hague, Netherlands)

15.30-18.00

169. Art Libraries

'Image Resources in the Visual Arts'

1. How to formulate the photographic question: a context for architectural and topographical photographs in England
   IAN LEITH (Acquisitions and Documentation Officers, National Monuments Record, English Heritage, Swindon, UK)
2. Graphic resources in the Spanish Art Libraries
   ALICIA GARCIA MEDINA (Librarian, Instituto Patrimonio Histórico Español, Madrid, Spain)
   TERESA COSO (Librarian, Biblioteca General d'Historia d'Art, Madrid, Spain)
3. Teaching students the art of retrieving architectural information
 KAREN LATIMER (Deputy Science Librarian, Queens University Belfast, Belfast, Northern Ireland)

170. *Unallocated*

171. *Unallocated*

15.30-18.00

172. Government Information and Official Publications

'Government and Digital Information - a Vanishing Record'

1. World Bank virtual tools and learning program on archives and records management in development
   SUE O'NEILL JOHNSON (Senior Information Projects Officer), ELISA LIBERATORI PRATI and ANDRES M. McALISTER (Information Officers) (The World Bank, Washington DC, USA)
2. Strategies for managing digital records and documents in the public sector in Sub-Saharan Africa
   Stratégies de gestion des documents et archives numériques du secteur public de l'Afrique subsaharienne
   PATRICK NGULUBE (University of Natal, School of Human and Social Studies, Scottsville, Pietermaritzburg, South Africa)
3. For national memory and for democratic accountability: in an online age are these conflicting tensions still manageable within the construct of 'Official Information'?
   Pour la mémoire nationale et pour la responsabilité démocratique : à l'ère du numérique, ces tensions contradictoires sont-elles compatibles avec la construction de « l'information officielle » ?
   ALAN SMITH (University Librarian, Victoria University of Wellington, Wellington, New Zealand)
4. The Institute of Public Administration's Document Center: from paper to electronic records - a full image government documents database
   Le Centre de documentation de l'Institut d'administration publique:du papier à l'archivage électronique, une base de données de publications officielles en mode image
   RASHED S. AL-ZAHRANI (Assistant Professor, The Institute of Public Administration, Riyadh, Saudi Arabia

15.30-18.00

173. Regional Activities: Latin America and the Caribbean - *SI*

'Latin America and the Caribbean towards the Knowledge Society'

1. Investigación en Ciencia de la Información: un desafio latinoamericano para construir la sociedad de la información
   SUELI DO AMARAL (Library Professor, University of Brasilia, Brasilia, Brazil)
2. La literatura gris y su contribución a la sociedad del conocimiento
   Grey Literature and its contribution to Knowledge Society
   ELIZABETH RAMOS DE CARVALHO (Manager IFLA-LAC Regional Office, Ministry of Culture, Rio de Janeiro, Brazil)
3. ¿Cómo y para qué evaluar multimedia? Una expedición en tres viajes
   Evaluation of multimedia: why and how? An expedition in three voyages
   PAULA CADENAS MARIE (Comité de Evaluación de Formatos Digitales, Caracas, Venezuela)
4. Designing a Paraprofessional Training Program Across Time and Space
   MARIE-FRANÇOISE BERNABÉ (Bibliothèque Universitaire Antilles-Guyane, Schoelcher, Martinique)
   BLANCA HODGE (Philipsburg Jubilee Library, Sint Maarten, Netherlands Antilles)
   ANA TORRES (Director, Escuela de Bibliotecologia C.I., Guadalupe, San José, Costa Rica)
5. Un Centro de Conocimiento para los grupos etnics indigenas centroamericanos, Propuesta
   ALICE MIRANDA-ARGUEDAS (Librarian, National University, School of Library, Documentation and Information Science, Heredia, Costa Rica

15.30-18.00

174. Free Access to Information and Freedom of Expression (FAIFE) - *SI* - Open Forum

'Supporting Intellectual Freedom through Libraries Worldwide'

The IFLA initiative on Free Access to Information Freedom of Expression will be introduced and the first IFLA/FAIFE World report will be launched.

1. IFLA in Jerusalem. Information for co-operation: creating the global library for the future
   CENDRELLA ABDALLAH (Automation Librarian, Lebanese American University, Beirut, Lebanon)

15.30-18.00

175. Newspapers

'The Newspaper in the Americas'

1. Brazilian history through journalism
   CELIA ZAHER (Technical Director, National Library of Brazil, Rio de Janeiro, Brazil
   MARIA ANGELICA VARELLA (Periodicals Division, National Library of Brazil, Rio de Janeiro, Brazil
2. News from El Dorado: newspapers of the California gold rush
   GARY KURUTZ (Director of Special Collections, California State Library, Sacramento, USA)
3. Mesplet to Metadata: Canadian newspaper preservation and access
   SANDRA BURROWS (Newspaper Specialist, Reference and Information Services, National Library of Canada, Ottawa, Canada)
4. The Future of News
   ERIC NEWTON (Founding Managing Editor, The Newseum, President, Whole Story Associates, Annadale, USA)

Evening

176. Consulate Receptions

Receptions are held for the citizens of some countries. Details are usually available from the National Association Member of the county concerned.

Thursday, August 23, 2001

08.30-10.00

177. Past, Present, Future IFLA Conference Organizers
(By invitation only)

09.00-11.00

178. Library and Research Services for Parliaments SC II
Division Room

08.30-10.30

179. Free Access to Information and Freedom of Expression (FAIFE)
Workshop I

'X-rated'

Using confronting slides/video, brief presentations on the areas of sex, pornography and obscenity/ideology, religion & politics/dangerous facts (e.g. bomb making, drugs)/ explicit violence. We are to consider that a wholehearted defense of intellectual freedom must include the defense of the right to express views that we personally abhor. It is intended to assist our colleagues and us in reconciling a resolute defense of intellectual freedom with our personal preferences not to be confronted with material we may dislike.

08.30-12.30

180. Regional Activities: Asia and Oceania Workshop

'Small is Beautiful: Creative Strategies for Library Development'

1. The Children's Library: a gift of love from the community
   SHUKRIAH YON (Librarian, Penang State Public Library, Penang, Malaysia)
   ONG CHAI LIN (Director, Penang State Public Library, Penang, Malaysia)
2. Logframe analysis for project applications
   GARY E. GORMAN (Professor, School of Communications & Information Management, Victoria, University of Wellington, Wellington, New Zealand) -
3. Small is beautiful: the library train for homeless children
   AREE CHEUNWATTANA and PIMOL MEKSAWAT (Library Science Lecturer and Librarian, Srinakarinwirot University, Bangkok, Thailand)
4. Strategies for sponsorship
   HARRISON PERERA (Assistant Director Information, The British Council, Colombo, Sri Lanka)
5. Creative strategies: USP region
   ELIZABETH READE-FONG (Deputy University Librarian (Customer Services), University of South Pacific Library, Suva, Fiji)
6. Local needs; global help: soliciting funds for a library in an isolated community in Papua New Guinea
   SAM KAIMA (Senior Lecturer, Library and Information Sciences, University of Papua New Guinea, Papua New Guinea)

181. *Unallocated*

08.30-12.30

182. National Libraries with Management and Marketing Workshop

'Marketing National Libraries'

1. *Is it really necessary to market National Libraries?*

- National Central Library - Rome, Italy
  NATALIA SANTUCCI (Bibliotheca Nazionale Centrale- Roma, Rome, Italy)
- National Library of the Netherlands, The Hague, Netherlands
  PERRY J. MOREE (Koninklijke Bibliotheek, The Hague, Netherlands)

2. *How to raise the profile for the National Library?*

- National Library of Latvia
  ANDRIS VILKS (National Library of Latvia, Riga, Latvia)
- National Library Board, Singapore
  R. RAMACHANDRAN (National Library of Singapore)
- National Library of Scotland

IAN McGOWAN (National Library of Scotland, Edinburgh, Scotland, UK)

3. *National Libraries - not for researchers only: how to market the content of the National Libraries?*

- National Library of Australia
  PAM GATENBY (National Library of Australia, Canberra Act, Australia)
- Royal Library of Belgium
  WILLY VANDERPIJPEN (Royal Library of Belgium, Brussels, Belgium)
- The British Library
  MICK OSBORNE (The British Library, London, UK)

4. *Marketing tools: cultural programmes, exhibitions, www, relationships with the press etc.*

- Library of Congress
  JILL BRETT (Library of Congress, Washington D.C., USA)
- National Library of New Zealand
  CHRISTOPHER BLAKE (National Library of New Zealand, Wellington, New Zealand)
- National Library of France
  VIVIANE CABANNES (Bibliothèque nationale de France, Paris, France)

08.30-12.30

183. Information Technology Workshop

'Multilingual Access for Information Systems'

1. Multilingual access for information systems
   Accès multilingue aux systèmes d'information
   Mehrsprachiger Zugang bei Informationssystemen
   CAROL PETERS (Istituto di Elaborazione della Informazione, CNR Pisa, Italy)
   PRAIC SHERIDAN (Director, MNIS-TextWise Labs, Syracuse New York, NY, USA)

08.30-12.30

184. Libraries for Children and Young Adults Workshop

'Children's Library Guidelines - a Presentation on a Revised Version'

185. *Unallocated*

186. Management of Library Associations Workshop

'Twinning for development: a workshop where we discuss different models for a Twinning Programme between Library Associations'

- KARI GULBRAAR (Vice-President of the Norwegian Library Association)
- ENOCH CHIPUNSA (President of the Zimbabwe Library Association)
- BO MARKUSSON (Chair of the Special Interest Group of the Swedish Library Association on Africa, Asia and Latin America)

08.40-12.00

187. Science and Technology Libraries Workshop

Off-site: *Study Tour to the MIT Science and Engineering Library MIT Science & Engineering Library* (Pre-register with Julia Gelfand at jgelfand@sun1.lib.uci.edu. Meet on the steps of the Boston Public Library on Copley Square at 8:40 a.m. Look for the STS/MIT sign. We will travel by public transportation at $1 each way.)

08.30-17.00

188. Bibliographic Control with UBCIM and Permanent UNIMARC Committee Workshop

'Information Exchange in the 21st Century: Formats and Standardization'

1. UNIMARC Manual - Bibliographic Format: updated edition and future developments
   UNIMARC Manual : Bibliographic Format - Edition mise à jour et développements futurs
   MIRNA WILLER (National and University Library, Zagreb, Croatia)
2. Introduction to *UNIMARC Manual - Authorities Format*, 2nd Edition
   Introduction à la deuxième édition de UNIMARC Manual - Authorities Format
   ALAN DANSKIN (The British Library, Boston Spa, UK)
3. UNIMARC for Classification
   JOAN MITCHELL (Online Computer Library Center, Dublin, USA)
4. UNIMARC Holdings Format; the state of the art
   ROSA MARIA GALVÃO (Biblioteca Nacional, Lisbon, Portugal)
5. The UNIMARC Format for Music: proposals and standardization of data for international exchange
   CRISTINA MAGLIANO (Istituto Centrale per il Catalogo Unico delle Biblioteche Italiane e per le Informazioni Bibliografiche, ICCU, Rome, Italy)
6. Using MARC21 for Electronic Resource Description and Access
   REBECCA GUENTHER (Library of Congress, Washington, USA)
7. UNIMARC *Guideline no. 6:* Electronic resources
   SOFIJA KLARIN (National and University Library, Zagreb, Croatia)
8. Closing the Circle: Automated Authority Control and Multiscript YIVO Catalog
   JOAN M. ALIPRAND (The Research Libraries Group, Mountain View, USA)
   BELLA H. WEINBERG (St John's University, Jamaica, USA)
9. Mapping
   SALLY McCALLUM (Library of Congress, Washington, USA)
10. Mapping UNIMARC Data to the RLG/CERL Hand Press Books Database
    JOE ALTIMUS (The Research Libraries Group, Mountain View, USA)
11. OCLC's UNIMARC/MARC21 Conversion
    JAY WEITZ (Online Computer Library Center, Dublin, USA)
12. ONIX, a New Product Information Standard
    BRIAN GREEN (Book Industry Communication, London, UK)
13. UNIMARC, ONIX and the Future
    ALAN DANSKIN (The British Library, Boston Spa, UK)

08.30-17.00

189. Mobile Libraries Workshop

'Mobile Library Services in the New Millennium: Delivering Lifelong Learning Access Across Space and Time'

Session I:

1. IFLA and Mobile Libraries
   MARIA LAOSUTHAUWAN
2. Academic Mobile Libraries
   SUJIN BUTDISUWAN (Director/Assistant Professor, Academic Resource Center, of Mahasarakham

University, Thailand)

3. Library Services in Vietnam
   LE THI THANH THUY (Deputy Head of Research and Development Department)
4. Mobile Libraries and the Asia Foundation: The Cambodian Experience
   MARGARET BYWATER

Session II:

5. Mobile Transportation: Talking with the Expert
   STANLEY C. FRYE (Frye Engineering Consulting, Sidney, Ohio, USA)
6. French Mobile Libraries Past and Present
   FRANÇOISE DANSET and VICTORIA COURTOIS (Bibliotheque departmentale du Val d'Oise, France)
7. Mobile Libraries in the Scandinavian countries: development in view of legislation and financial support
   RUTH ØRNHOLT (Hordaland County Library, Bergen, Norway)
8. Blue Bag Service and Literacy Development in Greece
   ELGA KAVADIAS (Greece Council for Children's and Adolescents' Libraries, Athens, Greece)
9. Mobile Libraries in Malaysia
   DATIN PADUKA SHAHANEEM HANOUM (Director, Selangor Public Library Corporation, Malaysia)
10. Bill & Melinda Gates and the Boys & Girls Clubs of King County Washington: The Techmobile Experience
    TBA

Session III:

11. History of Mobile Libraries: Discussion with the Author
    IAN STRINGER (Editor, Service Point Journal)
12. Feasibility Study of the History of Mobile Libraries: Beyond the History of Mobile Libraries from the Camel to the Internet
    AGNES WOLFF and MOUNIR KHALIL (City University of New York , New York, USA)
13. The Power of the Circle: Cooperative Native American Library Projects in New Mexico
    MARY ALICE TSOSIE (Center for Southwest Research Zimmerman Library, University of New Mexico) and
    ALANA MCGRATTAN (Santa Fe Indian School)
14. PROBIQUA Project (Guatemala) and Its Impact Since 1990
    RIDOBERTO ZAMORA (Director, PROBIQUA: Proyecto Bibliotecas, Guatemala)
15. Mobile Library Services in Malaysia
    DATIN PADUKA SHAHANEEM HANOUM (Director, Selangor Public Library Corporation, Malaysia)

Session IV:

16. Reports from the Evaluators: Assessing the Workshop
17. Identifying the Action Steps and People: Planning for Future Development

08.30-17.00

190. Library Services to Multicultural Populations Workshop

'Library Services and Resources for Multicultural Populations'

1. Reading behavior and text use in a multicultural perspective: a research project
   LOURINA DE VOOGD (Coordinator of Library Services for Immigrants, NBLC, The Hague, Netherlands)
2. Serving immigrants in Queens: the New Americans Program of the Queens Borough Public Library
   ADRIANA ACAUAN TANDLER (Head, New Americans Program, Queens Borough Public Library, Queens, New York, USA)
3. New Americans Program: Forging Partnerships for Diversity
   FRED J. GITNER (Assistant Head, New Americans Program, Queens Borough Public Library, Queens, New York, USA)

4. Strategies for meeting the multicultural needs of public library users
   MARTIN GOMEZ (Executive Director, Brooklyn Public Library, Brooklyn, New York, USA)
5. The new International Public Library in Stockholm, Sweden
   BARBRO EJENDAL (Executive Director, The International Public Library, Stockholm, Sweden)
6. Buildings partnerships: libraries and IMLS
   JOYCE RAY (Director, Institute of Museum and Library Services, Washington, USA)

09.00-12.00

191. Biological and Medical Sciences Libraries with Libraries Serving Disadvantaged Persons Workshop

Off-site: *Beth Israel Medical Center*

'Consumer Health Information - A Comprehensive Web-based Resource and a Consumer Health Center'

1. Medline Plus: A comprehensive web-based health information resource
   ERICA BURNHAM (Consumer Health Information Coordinator, National Network of Libraries of Medicine, Middle Atlantic Region, New York, USA)
2. Tour of a comprehensive consumer health center
   HENRIETTA GREEN (Librarian, Beth Israel Hospital, Boston, USA)

09.00-12.00

192. University Libraries and other General Research Libraries Workshop

Off-site: *Northeastern University, Boston*

'Managing Academic and Research Libraries Partnerships'

1. Managing Academic and Research Libraries Partnerships
   La gestión de las alianzas en las bibliotecas universitarias y de investigación
   HANNELORE RADER (University Librarian, University of Louisville, Louisville, USA)
2. Managing Partnerships with University Support Units
   La gestión de las alianzas con otras unidades de apoyo a la universidad
   ILONE ROCKMAN (Deputy Director, California State University, Hayward, USA)
3. External partnerships
   Alianzas externas
   TOM WILDING (Director, Library, University of Texas, Arlington, USA)

09.00-16.00

193. Education and Training Workshop

Off-site: *Simmons College*

'Extending the Reach of Library/Information Science Educion'

Morning:
Moderator: Stanley Kalkus

1. Reaching the unreached for library and information science education: a perspective for developing countries

S.B. GHOSH (Professor, Faculty of Library & Inf. Science, Indira Gandhi National Open University, Maidan Garhi, New Delhi, India)

2. Extending the Reach of library/Information Science Education
   TERRY WEECH (Associate Professor, University of Illinois)
3. Impact of Internet on Schools of Library and Information Science in Thailand
   LAMPANG MANMART (Associate Professor, Department of Library and Information Science, Faculty of Humanities and Social Sciences Khon Kaen University, Khon Kaen, Thailand)

Afternoon:
Moderator: Stepheney Ferguson

4. Meditation, mediation and multimedia: A pragmatic philosophy
   SUE MYBURGH (Senior Lecturer, Information Management, University of South Australia)
5. Interaction and student retention, success and satisfaction in web-based learning
   KATHLEEN BURNETT (Associate Dean & Associate Professor, School of Information Studies, Florida State University, USA)
6. On the reform of Library and Information Science Education according to the changes of librarians' function under network environment
   MA HAIQUN (Department of Information Management, Heilongjiang University, Harbin, R.O. China)

09.00-15.00

194. User Education with University Libraries and other General Research Libraries Workshop

Off-site: *Simmons College*

'User Education Guidelines: The Contribution of Webpages - Directrices sobre formación de usarios: la contribución del entorno web'

1. Materiales en castellano sobre alfabetización en información: primeros resultados de un proyecto del Comité Permanente de Bibliotecas Universitarias y otras Bibliotecas Generales de Investigación de la IFLA
   CHRISTOBAL PASADAS-URENA (Librarian, University of Granada, Granada, Spain)
2. Group exercise on international guidelines on user education
   JESUS LAU (Librarian, Universidad Autónoma de Ciudad Juárez, Juárez, Mexico)
   BARBARA FORD (Librarian, Chicago Public Library, Chicago, USA)

09.15-12.30

195. Government Libraries Workshop

Off-site: *Middlesex Law Library*

'Strategies for Recognition: how to promote Government Library Services'

1. How to win friends and influence people: growth strategies for government libraries
   SUZANNE BURGE (Ombudsman, UK Government, London, UK)
2. From library buildings to camel library: reaching the Kenyan pastoralists
   SIMON MUNGAI (Librarian, National Documentation Service, Kenya National Archives and Documentation Service, Kenya)
3. Strategies for government libraries exemplified by the strategy for Finnish government information services, the Valtipa Network
   IRJA PELTONEN (Head of Information Services, Ministry of Finance, Helsinki, Finland)
   LENA OLSSON (Library Director, Stockholm Institute of Education, Stockholm, Sweden)

4. Also speaking:
   MARNIE WARNER (Law Library Coordinator)
   MARIE SACCOCCIO (Esq., Attorney at Law Trial Courts)

09.30-13.00

196. Latin America Workshop

'America Latina en las bibliotecas de los Estados Unidos: Coleciones y proyectos cooperativos/ Latin-America in the United States Libraries: Collections and Cooperative Projects'

Off-site: *Harvard University*
Organized by IFLA-LAC, SALALM, and Harvard University.

- ADAN GRIEGO (Stanford University, Latin-American Collections in the USA)
- DAN HAZEN (Harvard University Cooperative Projects)
- VICTOR TORRES (University of Puerto Rico, SALALM and ENLACE).

10.30-12.30

197. Free Access to Information and Freedom of Expression (FAIFE) Workshop II

'Taking a stand'

Introduced by librarians from different parts of the world who have had to respond to FAIFE issues to stimulate discussion on ways of addressing them. Presentations from six countries (15 minutes each) followed by discussion (30 minutes).

Presenters:

- France: TBA
- Russia: TBA
- UK: TBA
- USA: Linda A. Wright, Director, Milford Town Library
- TBA
- TBA

13.30-17.30

198. Art Libraries Workshop

'Current Issues in Art Library Management'

1. The role of the Archives, Library and Museum Records department at the Guggenheim Museum, New York: the Hilla Rebay exhibition test case
   DEIRDRE DONOHUE (Librarian, Solomon R. Guggenheim Museum, Archives Library and Museum Records Department, New York, USA)
2. Art libraries and information services network: integrating resources and attaining visibility
   MARIA CHRISTINA BARBOSA DE ALMEIDA (Professor, Library Science and Documentation Department, University of Sao Paulo, Sao Paulo, Brazil)
3. Spreading the word: libraries as vital players in the information age
   SUSAN V. CRAIG (Art and Architecture Librarian, University of Kansas, Murphy Art and Architecture Library, Lawrence, USA)

4. Training in the National Art Library
   JOHN MERITON (Head of Public Services, Victoria and Albert Museum, National Art Library, London, UK)

13.30-17.30

199. Bibliography and National Libraries Workshop

'What makes a good national bibliography even better? Current situation and future prospects.'

1. National Bibliographies and the International Conference on National Bibliographic Services Recommendations: Introduction
   Национальные Библиографии и Рекомендации Международной Конференции по Национальным Библиографическим Службам: Введение
   Las bibliografías nacionales y la Conferencia Internacional sobre recomendaciones a los Servicios Bibliográficos Nacionales: Introducción
   ANNE M. HASUND LANGBALLE (Associate Professor, Bibliographic Services Department, National Library of Norway, Oslo Division, Oslo, Norway)
   BARBARA BELL (Government Information Librarian, College of Wooster, Wooster, Ohio, USA)
2. National bibliographies and the International Conference on National Bibliographic Services recommendations: Europe; North, Central and South America; and Oceania
   Национальные библиографии и Рекомендации Международной Конференции по Национальным Библиографическим службам: Европа; Северная, Центральная и Южная Америка; Океания
   Las bibliografías nacionales y la Conferencia Internacional sobre recomendaciones a los Servicios Bibliográficos Nacionales: Europa; América del Norte, América Central y América del Sur; Oceanía
   ANNE M. HASUND LANGBALLE (National Library of Norway, Oslo Division Oslo, Norway)
3. National bibliographies and the International Conference on National Bibliographic Services recommendations: Africa, Middle East and Asia
   Национальные библиографии и рекомендации международной конференции по библиографическим службам Африка, ближний восток, Азия
   Las Bibliografías Nacionales y la Conferencia Internacional sobre las Recomendaciones para los servicios Bibliográficos Nacionales: África, Oriente Medio y Asia
   BARBARA BELL (Government Information Librarian, College of Wooster, Wooster, Ohio, USA)
4. Perspective on names in the South African National Bibliography: Past, present and future
   Les noms d'auteurs dans la Bibliographie nationale d'Afrique du Sud : passé, présent et futur
   Перспектива Национальной библиографии Южной Африки:
   Прошлое, настоящее и будущее
   TIENIE DE KLERK (Project Leader, BibSA, National Library of South Africa, Pretoria, South Africa)
5. Transforming the Swaziland National Bibliography (SNB): vision of currency, access, coverage and quality
   Преобразование национальной библиографии Свазиленда (SNB): Концепция распространения, доступа, охвата и качества
   PAIKI MUSWAZI (Head of Special Collections, University of Swaziland Library, Swaziland)
6. Cooperation + Web Access = Timeliness
   Сотрудничество + сетевой доступ = оперативность
   Cooperación + Acceso a la red = Oportunidad
   EVA TEDENMYR (Head, National Bibliography: Monographs, National Library of Sweden, Stockholm, Sweden)
7. The National Bibliography concept in a changing information environment
   Концепция Национальной библиографии в изменяющейся информационной среде
   El Concepto de Bibliografía Nacional en un medio informativo cambiante
   JANNE ANDRESOO (Coordinator of Bibliographic Activities, National Library of Estonia, Tallin,

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Estonia)

8. Changes in the National Bibliographies, 1996-2001
   UNNI KNUTSEN (Head, Bibliographic Services Department, National Library of Norway, Oslo Division, Oslo, Norway)
9. Usages et utilité des bibliographies nationales : quelles perspectives?
   Uses and usefulness of national bibliographies : which perspectives?
   Каковы перспективы использования и полезности национальных библиографий?
   Usos y utilidad de las bibliografías nacionales: ¿qué perspectivas se presentan?
   MARCELLE BEAUDIQUEZ (Director, Agence bibliographique nationale, Bibliothèque nationale de France, Paris, France)
10. Legal Deposit of on-line materials and National Bibliographies
    Обязательный экземпляр сетевых материалов и Национальные Библиографии
    MARIANNE SCOTT (Former National Librarian of Canadam Ottawa, Canada)

13.30-17.30

200. Document Delivery and Interlending Workshop

'The ISO Interlibrary Loan Protocol: Demonstrating Interoperability'

Off-site: *Boston Public Library*

The workshop will begin with a non-technical overview of the international standard for interlibrary loan communication, the ISO ILL Protocol. Six vendors with Protocol-compliant systems will demonstrate the exchange of ILL requests and responses to those requests. The messages will highlight messages used by the borrower (requester) as well as the lender (supplier). The workshop has been designed to provide time for participants to talk to vendors about their ILL products.

The vendors and their products include:
Auto-Graphics - Wings
Epixtech - Resource Sharing System
Fretwell-Downing Informatics - Virtual Document eXchange
The Library Corporation - Library. Request
Relais International - Relais
Research Libraries Group - ILL Manager

1. Improving Interoperability of Interlending and Document Delivery Systems
   MARY E. JACKSON (Senior Program Officer for Access Services, Association of Research Libraries, Washington, USA)
2. Informal demonstrations of the ISO ILL Protocol by vendors with Protocol-compliant products

13.30-17.30

201. Preservation and Conservation with Information Technology Workshop

'Preservation and Digitization: Natural Partners?'

The workshop will feature a structured conversation on basic and practical aspects of digitization among practitioners from a variety of institutions that have developed digitization programs with a view to determining commonalties among program components such as staffing, equipment and software, types of collections being digitized, workflows, conservation needs, navigational tools, etc. Participants will be asked to respond to a series of questions ahead of time and to supply copies of forms, checklists, tracking sheets, or other aids; these will be gathered and codified as a workshop handbook. At the workshop, practitioners will be asked to share information and to answer questions from the floor.

202. *Unallocated*

13.30-17.30

203. Universal Dataflow and Telecommunications Workshop

'Z39.50 and the Bath Profile: Interoperability for Resource Discovery and Virtual Catalogues'

1. Improving Z39.50 Interoperability: Z39.50 Profiles and Testbeds for Library Applications
   Amélioration de l'interopérabilité des systèmes grâce à Z39.50 : Profils Z39.50 et bancs d'essai pour des développements en bibliothèques
   WILLIAM E. MOEN (Assistant Professor, University of North Texas, School of Library and Information Sciences, Denton, USA)
2. Bath Profile Z39.50 Server Compliance Test Results: Preliminary Findings
   SLAVKO MANOJLOVICH (Associate to the University Librarian for Systems and Planning, Memorial University of Newfoundland, St John's, Canada)
3. Cross my Domain and Hope to Die: Navigating the Rough Waters of Interoperability with the Bath Profile
   BRENDA BAILEY (Director of Networking and Resource Sharing, Colorado State Library, Denver, USA)

13.30-17.30

204. Management of Library Associations with Library and Information Science Journals Workshop

'The Free Press: Editorial Independence in Association Magazines'

- LEONARD KNIFFEL (Editor and Publisher, American Library Association, Chicago, USA)
- LIS Journal in the Knowledge Age
  EILEEN BREEN (Managing Editor, MCB University Press, Bradford, UK)

14.00-16.00

205. Social Science Libraries Workshop

'New Technologies for the 21st Century: Impacts on Social Science Libraries'

Off-site: *Wong Auditorium, MIT Campus*

1. Live virtual reference: the MIT experience
   PAT FLANAGAN (Associate Head Librarian and Reference Coordinator, Dewey Library, MIT, Cambridge, USA)
2. Providing library data services using the Virtual Data Center
   MICAH ALTMAN (Associate Director, Harvard-MIT Data Center, Cambridge, USA)
   MICHAEL KROT (, Harvard-MIT Data Center, Cambridge, USA)
   HEATHER McMULLEN (Social Sciences Data Librarian, Harvard College Library, Cambridge, USA)
3. JSTOR - Archiving and Accessing Fulltext Journals
   TBA (JSTOR, New York, USA)

206. *Unallocated*

Evening

207. Receptions Harvard and MIT

Friday, August 24, 2001

08.00-10.00

208. SC II Acquisition and Collection Development
209. SC II Bibliography
210. SC II Audiovisual and Multimedia
211. SC II Biological and Medical Sciences Libraries
212. SC II Cataloguing
213. SC II Government Libraries
214. SC II Libraries for the Blind
215. SC II Geography and Map Libraries
216. SC II Library Buildings and Equipment
217. SC II Library Theory and Research
218. SC II Management and Marketing
219. SC II Libraries for Children and Young Adults
220. SC II Preservation and Conservation
221. SC II Public Libraries
222. SC II Rare Books and Manuscripts
223. SC II School Libraries and Resource Centres
224. Officers Training Session

08.30-10.00

225. Executive Board III

09.30-10.30

226. *Unallocated*

10.15-12.15

227. SC II Statistics
228. SC II Art Libraries
229. SC II Asia and Oceania
230. SC II Africa
231. SC II Classification and Indexing
232. SC II Document Delivery and Interlending
233. SC II Education and Training
234. SC II Government Information and Official Publications
235. SC II Information Technology
236. SC II Latin America and the Caribbean
237. SC II National Libraries
238. SC II Libraries Serving Disadvantaged Persons
239. SC II Library Services to Multicultural Populations
240. SC II Reading
241. SC II Science and Technology Libraries

242. SC II Serial Publications
243. SC II Social Science Libraries
244. SC II University Libraries and other General Research Libraries

10.30-11.30

245. Officers Training Session

246. *Unallocated*

10.45-12.45

247. Free Access to Information and Freedom of Expression (FAIFE) Business Meeting

12.00-14.00

248.Copyright and Other Legal Matters Business Meeting

11.30-12.30

249. Guest Lecture V - *SI*

Preservation in the USA: A Case Study in Cooperation
DEANNA MARCUM
GEORGE FARR
ANN RUSSELL

Deanna Marcum is President of the Council on Library and Information Resources, George Farr is Director, Division of Preservation and Access at the National Endowment for the Humanities and Ann Russell is Executive Director of the Northeast Document Conservation Center. **12.30-14.30**

250. CB II General Research Libraries (Div I)
251. CB II Special Libraries (Div II)
252. CB II Libraries Serving the General Public (Div III)
253. CB II Bibliographic Control (Div IV)
254. CB II Collections and Services (Div V)
255. CB II Management and Technology (Div VI)
256. CB II Education and Research (Div VII)

12.30-14.30

257. CB II Regional Activities (Div VIII)

13.00-14.00

258. Panel Discussion on Cuba - *SI*

15.00-17.00

259. Council II and Closing - *SI*

Saturday, August 25, 2001

All day:

- First meeting of the IFLA Governing Board
- Post-Conference Tours

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Privacy in the Digital environment—issues for libraries*

Michael Gorman
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California State University, Fresno, USA

Introduction

I published a book on library values[1] last year in which, based on extensive readings in both axiology and librarianship and on the experience of 40+ years work in libraries, I formulated and discussed eight "core" values—one of which is *Privacy*.

What is the meaning of privacy?

I sometimes think that "privacy" is in the ear of the listener. Certainly, there is by no means a universally accepted definition of the word. In Webster's Third, "private" is defined as "belonging to, or concerning, an individual; personal; one's own …"[2] Private things, therefore, belong to the individual—they are her or his personal property. In a free society, the things that belong to you legally are inalienable and cannot be removed or interfered with without your permission. We all need privacy in a spatial sense and an informational sense. Our spatial privacy gives us the right to be alone, to associate only with those with whom we choose to associate, and to be free from surveillance. Our informational privacy is the right to control personal information and to hold our retrieval and use of information and recorded knowledge to ourselves, without such use being monitored by others. We also have the privacy that is embodied in the term "private property"—those things that we own, including intangible, intellectual private property. The rights to privacy that seem so obvious to us in our daily lives are not always legally guaranteed or practically achievable—particularly in the technological context of today.

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* **ADAPTED FROM A CHAPTER IN THE AUTHOR'S** *OUR ENDURING VALUES*. CHICAGO: ALA, 2000

[1] Gorman, Michael. *Our enduring values*. Chicago: ALA, 2000.

[2] *Webster's Third new international dictionary of the English language*. Springfield, Mass. : Merriam, 1976.

What has technology wrought?

Technology is neither good nor bad in and of itself. Technological advance may contribute to societal progress or may be a detriment to society or may be both (just think of advances in fertility medicine in a world that contains 6 billion people) or may be neutral. It is a natural human tendency to personalize technology in general and specific applications of technology. For instance, how often have you heard someone say "I hate cell 'phones"? The truth is that large numbers of us do not "hate" cell 'phones; they dislike the intrusive misuse of them by boors, bores, and solipsists. It is the human use and misuse of technology that arouses the emotions and it is the human use and misuse of technology that we should observe, study and seek to amend for the better.

It often seems that every advance in technology exacts a counter-balancing price or detriment. There is no such thing as a free technological improvement. Possibly the most obvious price that we are all paying is the actual and potential erosion of privacy caused by the compilation of, and easy access to, large and complex databases resulting from commercial, governmental, and non-profit transactions. The latter, of course, include transactions between libraries and library users and transactions that take place in libraries. Here are words to make us wary. "Every keystroke can be monitored. And computers never forget."[3] The same article quotes Marc Rotenberg, director of the Electronic Privacy Information Center:

> With the new online services, we're all excited that this is going to be our window on the world, to movies to consumer services, for talking with [*sic*] our friends. The reality is that this may be a window looking in.

The point is that it is not technology that is the enemy of privacy but our joyful use of technology. We give away something of ourselves each time we engage in online transactions. Many people worry about potential governmental and commercial abuse of the information we are required to supply by law or in pursuit of a commercial transaction. Though these are real concerns, there is a wider picture that goes beyond the economic and governmental. We live more and more of our lives online and the accumulations of data about us grow ever larger while there is an ever-increasing ability to retrieve and manipulate that data speedily. We are coming to see that the history of society is cyclical and that cyberspace resembles nothing as much as a medieval village—a place in which privacy was unknown.

Electronic technology pervades government, commerce, and many forms of social interaction. We are right in being concerned about the integrity of our personal data and should support efforts by governments and others to devise regulations and codes that limit (but can never eliminate) incursions on that data. As long ago as 1973, the United States Department of Health, Education, and Welfare issued a code[4] on personal data systems based on the following (paraphrased) principles:

- no secret record keeping systems
- access to one's own records
- the ability of an individual to prevent data gathered for one purpose being used for another
- the ability of individuals to correct or amend their own records
- organizations collecting personal data must ensure its reliability and prevent misuse

It seems to me that those 25-year old principles still hold true in a very different computer world. They are even more difficult to enforce than they were then but they do provide the basis for humane and responsible collection and retention of personal data.

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[3] . McGrath, Peter. Info 'snooper highway.' *Newsweek* vol. 125, no.9 (February 27 1995) pp. 60-61.

[4] . U.S. Dept. of Health, Education and Welfare. Secretary's Advisory Committee on Automated Personal Data Systems. Records, computers, and the rights of citizens. Washington, DC: GPO, 1973.

The history of privacy

In the Western world, privacy emerged as a social issue in the 18th century. Before then, people, even rich and powerful people, lived open lives because of the nature of society and the buildings in which they lived. Most people lived, ate, slept, played, etc., communally. Even more importantly in respect of privacy, there was little or no distinction between domestic life and work life. Reading and copying, for example, were communal activities in the Middle Ages. The concept of privacy and the solitary life of the mind came when communities and extended families gave way to nuclear families with houses with solid walls that contained separate rooms and were situated on private land. In the 18th and most of the 19th centuries, such houses belonged to the wealthy. Even then, communities persisted in the cohabitation of families and their servants. It was not until the 20th century that the opportunity for privacy was available to the less well off in Europe and North America. The important changes in the ways in which people lived and worked—notably the physical and psychological separation of work and "private life"—created a hunger for privacy that has been extended and asserted in a number of steps over the decades. One very important step in the United States was the publication of a paper by future Supreme Court Justice Brandeis and a colleague arguing "the right to be let alone."[5] That influential paper (more than 100 years ago) was spurred by fears of the intrusive capability of then new technologies—cameras, tabloid newspapers, telephones, etc. Brandeis was to argue later that wiretapping telephones was the equivalent of opening sealed letters[6] In the United States, the legal definition of privacy has evolved and developed slowly in the years since Brandeis' plea for privacy. The important Supreme Court case *Griswold vs. Connecticut* 7 (which said that a right to privacy implicitly, but not explicitly, contained in the US Constitution, underlies the right of married couples to use birth control) was only decided in 1965. There are those who say that the judgement that legalised abortion in the US—*Roe vs Wade*—the most famous case decided on the basis of an inherent constitutional right to privacy—is constitutionally flawed for that very reason. In other words, they believe that the US Constitution only protects that which it lists explicitly. One could not possibly underestimate the effect on American society of an acceptance and application of that view.

There is a considerable body of opinion among constitutional lawyers and philosophers that the US Constitution was framed on the basis of natural law and natural rights that are inherent in an ordered society.[8] Given that is so, it is not hard to see that the US Constitution is capable of interpretation that goes beyond the exact words of that document to place natural rights in a modern context. Privacy is, of course, one of the natural rights that was understood in the late 18th century. Privacy has been a matter of great weight to the individual and to society as a whole for more than 200 years but the right to privacy is nowhere near as entrenched in American law and constitutional thinking as most people believe it to be.

Privacy has remained a hot political, legal, and societal issue throughout the 20th century, and, in one form or another, is still fought over today. All American social movements have been combated by, among other things, invasions of privacy. All the protagonists of the women's movement, the fight for racial equality, the struggle for literary and artistic free expression, and other such movements have been subject to surveillance and intrusion by US government agencies and other compilers of dossiers on private lives. It would be naïve to believe that such outrages no longer exist, but it would be cynical to ignore the advances in privacy contained in the law. That being said, unless we restrain the effects of technology, those hard won legal rights are in danger of being vitiated by forces that cannot be controlled by law.

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5 . Brandeis, Louis and Samuel Warren. The right to privacy. *Harvard law review*. 1890.

6 . Cited in Tuerkheimer, Frank M. The underpinnings of privacy protection. *Communications of the ACM*. vol. 36, no. 8 (August 1993) pp. 69-73.

7 . Supreme Court decision US 381 (1965).

8 . Hamburger, Philip A. Natural rights, natural law, and American constitutions. *Yale law journal*. v. 102, no. 4 (January 1993) pp. 907-960.

The present and future of privacy

Technology, in the form of vast electronic records of online transaction of all kinds and the possibility of searching and retrieving personal data from those databases, is morally neutral. As noted before, people can use this technology for good or ill, for their own profit or in service of humanity. Our privacy is invaded daily—the task is to ensure those invasions are controlled and have benign outcomes. We have clear opportunities and dangers and should work to take advantage of the opportunities and reduce the dangers. In 1992, the American academic Alan Westin published a list of ten important trends in the protection of privacy.[9] The trends, which are holding up well in a rapidly changing world, include:

- joint ownership of personal information by individuals and institutions
- institutions may only use personal data with the consent of the individuals
- collectors of personal data will issue privacy codes
- storage and use of personal data will be regulated
- theft and misuse of personal data will be criminalized
- a US federal agency dedicated to the protection of privacy will be established

Many of Professor Westin's forecasts are proving to be accurate. One of them is not. It hard to see a federal agency of the kind that he envisages being established, not least because of the American distaste for central government oversight of personal matters. What has happened is the establishment of a seemingly ever-changing mixture of legislation, government regulation, and self-regulation. (A good example of the latter are the various American Library Association (ALA) policies and statements on privacy.)

A number of US federal agencies are actively involved in privacy issues. They include the Departments of Commerce; Health and Human Services; and Labor; the Federal Communications Commission; and the Federal Telecommunications Commission—each addressing medical, financial, telecommunications, Internet, etc., privacy issues in a piecemeal manner. There are a large number of federal laws affecting privacy. In 1999, the Privacy Exchange (maintained by the Center for Social and Legal Research (USA)—an organization devoted to the issue) listed the following:[10]

- Cable communications act (1984)
- Children's online privacy act (1998)
- Consumer credit reporting reform act (1996)
- Driver's privacy protection act (amended 1999)
- Electronic communications privacy act (amended 1997)
- Electronic funds transfer act (amended 1996)
- Fair credit reporting act (amended 1997)
- Family education rights and privacy act (1974)
- Freedom of information act (amended 1996)
- Privacy act of 1974
- Right to financial privacy act (1978)
- Telecommunications act (1996)
- Telemarketing and consumer fraud act (1994)
- Video privacy protection act (1988)

All these are complemented by a host of regulations, court decisions, state laws, local ordinances, and pending legislation. Outside the circle of governmental action at all levels, there are many voluntary agreements between and within public sector entities (including ALA and other library organizations). It is obvious that this is a multi-faceted problem—one that affects us all to a greater or lesser extent—and it is being addressed by many political and other agencies in the absence of a comprehensive public policy approach.

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[9] *Abstracted in* Schroeder, Deborah. A private future. *American demographics*. vol.14, no.8 (Auguswt 1992) p. 19.

[10] National sector laws. www.privacyexchange.org/legal/nat/sect/natsector.html

The complexity of the American approach is in stark contrast to the approach of the European Union, which has issued a *Directive on data protection (effective October 25th, 1998)* that is binding on all the members of the EU. This difference in approach means that there is no one US agency and no single body of law that can link to the EU's legal requirement that personal data about the citizens of those countries can only be transferred to non-EU countries that offer "adequate" privacy protection to that data.

Dealing with the EU directive would, of course, be far easier if there were, in the United States, a single federal law and a single federal government agency to which we could refer. In its absence, the US Department of Commerce has drafted a statement of principles[11] that echo some of the provisions of Professor Westin's 1992 publication. In summary, those principles are:

- *Notice*. An organization collecting personal data must inform the individuals involved of what they are doing and their rights.
- *Choice*. Individuals must be able to opt out of their data being transmitted to third parties.
- *Onward transmission*. Personal data can only be transmitted to third parties that subscribe to privacy protection.
- *Security*. Organizations collecting personal data must hold it secure against misuse, disclosure, destruction, etc.
- *Data integrity*. Personal data may only be used for the purposes for which it was collected.
- *Access*. Individuals must have reasonable access to the data that has been collected about them.
- *Enforcement*. There must be mechanisms (governmental and/or private) to ensure compliance with privacy principles. Those mechanisms must include recourse for individuals whose data has been misused, follow-up procedures to ensure remedies are being applied, and sanctions against organizations that violate personal privacy rights.

Given the increase in online transactions of all kinds, the great commercial value of personal data databases, and the increase in electronic technology capabilities, it is inevitable that privacy will continue to be a major issue and one that is more and more subject to government regulation and private sector codes and compacts.

What is the relation between privacy and libraries?

There is a great difference between the passive accumulation of personal data for a variety of legitimate purposes and the deliberate, active invasion of privacy. The former has potential for abuse, the latter is abuse. To my mind, the greatest scandal of the complex of scandals (real and invented) that afflicts the American political culture today is the wholesale and largely successful attack on the right to privacy. Letters are read, traps are laid, e.mails are reconstructed, bookstore records are happy hunting grounds for inquisitors, the most private aspects of lives are laid bare to be condemned and sniggered over, and the right to your own thoughts, your own relationships, and your own beliefs is trampled on by zealots and bigots. This is the world of 1984, the world of mind control, the world of mental totalitarianism. The confidentiality of library records and the confidentiality of the use of library resources are not the most sensational weapons in the fight for privacy but they are important, both on practical and moral grounds.

In practical terms, a lot of the relationship between a library and its patrons is based on trust and, in a free society, a library user should be secure in trusting us not to reveal and not to cause to be revealed what is being read and by whom. On moral grounds, we must start with the premise that everyone is entitled to freedom of access, freedom to read texts and view images, and freedom of thought and expression. None of those freedoms can survive in an atmosphere in which library use is monitored and individual reading and library use patterns are made known to anyone without permission. It is very important that all libraries follow a policy that ensures privacy and that they take steps to educate everyone in the library in that policy. In this context, we should always remember that most people in most libraries interact with library staff and student assistants far more than with librarians. Knowing this, a library with a privacy policy that is not communicated to all who work in the library is just as bad as one with no policy at all.

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[11] International Safe Harbor privacy principles. Draft—April 19, 1999. www.ita.doc.gov/ecom/shprin.html

There is a sad irony in the fact that pre-automated systems were far better at preserving the privacy of circulation and use records than their automated successors. Older readers may remember systems in which a book card and a user's card were matched for the time and only for the time that the book was borrowed. Once returned, the two cards were separated and not even Hercule Poirot could find any trace of the transaction ever having taken place. Now, an electronic circulation system will preserve all circulation and use records unless it is told not to do so. Most library systems are set to delete circulation information after the materials are returned, but how difficult would it be for a skilled person to restore those "deleted" records? It seems, sometimes, that computer records are forever, if one has the skill, the desire, and the time to retrieve them. In addition, many systems choose to maintain a record of the last library user to borrow something (for convenience if a checked-in item is found to have been damaged or mutilated)—a small but significant invasion of privacy. Libraries serve communities and communities breed gossip, nosiness, and prurience. Those who enjoy such things can easily find out who in their community has been reading about divorce, murder, diseases, dieting, dyslexia, and sexual variations. Is such a potential invasion of privacy worth the ability to track down library vandals?

Self-check

One technological innovation that is actually assisting the right to privacy is the "self-check" device. This machine enables the user to check out books and other materials on her own. I am not aware of any studies on the circulation patterns of self-check users as opposed to those who take their materials to a circulation desk. However, it would seem reasonable to assume that a library user with access to open shelves might feel freer to borrow "controversial" materials if assured that no one would see what she was borrowing. If this is true, such materials would go far beyond the obvious suspects—sexual content, etc.—and extend to, for example, materials on diseases, English professors borrowing Danielle Steele books, "happily married" people borrowing books on divorce, and musical snobs borrowing hip-hop records. The self-check machine, invented to speed up the circulation process, may well be a signal contribution to the library right to privacy.

Privacy and electronic resources

There is a serious problem of disparity of access to electronic resources. In the words of Elisabeth Werby:[12]

> … not all Americans are beneficiaries of the technological revolution. Indeed the Internet is "one of the more polarized aspects of life today in America." … Among the 'least connected' Americans are the rural poor, single parent and female headed households and young households …

The figures on the "digital divide" vary from one survey to another, but no-one disputes the existence of that gap. The public library is in a position to compensate for that gap (as are academic libraries—particularly state-supported institutions in communities that contain a significant number of the disadvantaged) by supplying free access and guidance in using that access. This means that the question of privacy and confidentiality is an ineluctable and important issue for libraries—like it or not. We provide access to the Internet because we believe in giving access to all materials, but this particular case is so important because we are providing access to a vital part of modern life. If we are to come to terms with a society in which computer skills are highly esteemed and rewarded and if we are to give access to modern communications to those who would otherwise be shut out, we will have to deal with the many consequences of that service. Privacy rights, intellectual freedom rights, parental rights, and other issues attached to Internet access are there and have to be confronted.

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[12] Werby, Elisabeth. The cyber library: legal and policy issues facing public libraries in the high tech age. National Coalition Against Censorship. www.ncac.org/cyberlibrary.html

There are many age-old problems connected with library privacy, but electronic resources and computer systems have introduced new dimensions to the struggle for confidentiality. Anyone who wishes can monitor the use of online journals, find out who gains access to which Web pages, set up "cookies" that create caches of information on sites visited and resources consulted, and do a myriad other things. Here is a news item from *USA today* (August 25th 1999):

> PALO ALTO, Calif. Privacy watchdogs are concerned about a "fun" new feature at Amazon.com [the online bookseller] that allows anyone on the Internet to find out what [*sic*] kinds of books, videos, and CDs employers at America's corporations are buying.

You do not have to be a paranoid to wonder a little, the next time you key in your name, address, and other details when ordering a book or video, about the uses to which those data may be put. The Amazon.com feature sounds harmless (not to mention boring) but the fact is that such services accumulate vast amounts of data in an effort to maximize sales (for example, I regularly get messages from them suggesting new titles that are similar to those I have bought before). The consequent fact is that mass of data is open to major violations of individual privacy.

Invasions of privacy are often done with good intentions, but everyone knows which road is paved with those. In the electronic arena, users and librarians have to act to mitigate invasions of privacy and to be always alert to the possibilities for snooping and more sinister uses of data about personal use of electronic resources. William Miller[13] quotes the chairman of Sun Microsystems as saying "You already have zero privacy—get over it," a breathtakingly candid acceptance of the 1984 implications of pervasive technology and a chilling indication of the attitudes of these modern robber barons. If he is right, then, surely, it behooves us to work even harder to preserve confidentiality at least in the area in which we work. Librarians should never agree to the loss of privacy and should work hard to preserve the privacy of the individual by enunciating principles, creating policies, and putting them into action. We need to develop more detailed privacy codes that are flexible enough to cover all kinds of library use in a rapidly changing technological environment.

Privacy in action

The American Library Association issued an "interpretation" of its *Library bill of rights*[14] that addresses these problems in very broad terms and provides what is, essentially, an overview of the issues and an ethical framework for library policies rather than specific practical steps to be taken. For instance, the interpretation states that "[u]sers have both the right of confidentiality and the right of privacy" but also says that library users must be advised that those rights may be threatened by the technical difficulty of ensuring security of electronic information on use. Therefore, a library formulating a privacy policy should not look to this document for the details of such a policy. That said, the document does provide a useful beginning and the following conceptual bases for a policy.

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[13]. in *Library issues: briefings for faculty and administrators*. Vol. 19, no. 5 (May 1999), p. [4].

14 . Access to electronic information, services, and networks / American Library Association. 1999. www.ala.org/alaorg/oif/electacc.html

- each library should relate its policy to the needs of its own community and the environment in which it operates
- library users have a right to confidentiality and privacy
- the rights apply to minors as well as adults.

This latter point is central to ALA's stance on "filtering" (the attempt to block "undesirable" electronic resources by programs) in that, since minors are entitled to the same rights as adults, there is no excuse for depriving adults of access to information deemed "harmful" to minors. Some American public libraries have sought to square this circle by using filters on most public terminals by setting aside "unfiltered" terminals for use by adults and minors with parental provision. This is a serious invasion of privacy in that no-one should be forced to identify themselves or to use certain marked terminals in order to gain access to the electronic resources they want or need.

The first step in formulating a privacy policy for libraries in the light of the ALA principles is to define the many issues that center on privacy. In essence, the library has to answer the following questions.

- Are circulation and other library records always confidential?
- Is the right to privacy different for different media?
- Does the age or the status of a library user affect privacy?
- Have all library users the right to access to all forms of information and recorded knowledge without monitoring?
- Under which circumstances can privacy be abridged?
- How far must the library go to ensure privacy?

Let me translate each of these questions into concrete (and actual) American examples and essay some answers.

- Q: Can law enforcement officers have access to circulation records?
  A: Those records should only be made available on production of a subpoena.
- Q: Does the right to privacy about book borrowing habits extend to Internet use habits?
  A: Yes, and any automatic tracking of use should be deleted or aggregated so that details of individual use are lost. It is acceptable, indeed recommended, that library use data be aggregated so that statistics on the use of the library classes of person (children, graduate students, etc.) can be retained and analyzed, even though the use patterns of individuals are erased.
- Q: Is a parent entitled to know what her child is reading or viewing? Is a college professor entitled to know which students have checked out materials she placed on reserve?
  A: the first is tricky, but a parent who is entitled to know what her child is reading is not entitled to access to library records to gain that knowledge. The library is not a child's guardian or monitor, and parents should gain their knowledge about their children's reading habits from the children in an atmosphere of mutual respect. The second question is easy. No:
- Q: Can any user of the library use any library materials and resources (including sequestered collections and Internet terminals) in privacy and without supervision?
  A: Libraries often keep collections of controversial materials in supervised places for reasons of security (it should never be for reasons of morality). Access to those collections should be a freely available to all users as possible. The only reason for monitoring Internet use is in cases when there is a time limitation because of demand for terminals exceeding supply.
- Q: If a children's or school library holds a reading competition, can it publish the list of books read by the winners?
  A: Yes, *but* only with the permission of the winners themselves. This illustrates the point that mutual consent is a necessary precondition of any breach of the confidentiality compact between the library and its users, even for benign reasons.
- Q: Should a library install barriers, screens, etc., or special furniture (even if they involve significant expense) to ensure that only an Internet user can see what he is viewing on a library terminal?

A: Yes. Just as a library user can read any library book without others knowing what he is reading, that library user should also be given reasonable accommodation to ensure privacy of Internet use.

Library privacy plans need to be built on a combination of principle—the natural law right to privacy—and experience—the case studies that illuminate and exemplify a principle in changing and different circumstances. The example of law enforcement access to library records is a perfect example of principle and experience in balance. The principle is that library records are confidential. Experience and the greater good of society tell us that confidentiality can be breached if, and only if, a formal legal instrument such as a subpoena is invoked and produced. Some years ago, FBI agents interrogated a number of academic librarians about the reading habits of foreign scientists working in this country. Quite properly, librarians were not awed by the flashing of a badge and, in almost all cases, refused to answer such questions in the absence of a proper instrument of authority.

As the reader will have seen from the questions and answers above, privacy and confidentiality issues are more complicated today than they were before. The environment in which we live is one of a complex of laws, regulations, regulatory bodies, and private practices. All the more reasons why libraries, and everyone who works in them, should be alert to the right to privacy and the policies that ensure that right is assured. Before electronic technology had the major impact on libraries that we see today, privacy and confidentiality of library records and personal data on library users were relatively simple affairs. We now live in a world in which many issues connected with going online are "hot" and affected by political and religious views. Our privacy codes need to be updated so that we can deal with modern circumstances without ever compromising our core commitment to privacy as an important part of the bond of trust between libraries and library users. That bond of trust is a precious thing and one that we should do our best to preserve. In the face of the onslaught of technology, it is more than ever important to preserve human values and human trust so that we can demonstrate that we are, above all, on the side of the library user and that user's right to live a private life.

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Privacy and information technology or what a give away!

Sue Brown
Chair of the UK Copyright and Indexing Group
UK

Introduction

"Privacy" and "Information Technology" – we seem to live in a world where possession and control of these are both highly valued in their own right and something that we desire more and more of – more privacy to do our own thing and be ourselves – more information technology to live, learn and work more quickly and more efficiently. In this context it could be said to be a perception that Information Technology makes it easier to be more private – information, delivered by technology just for me. However there are conflicts of interest between the desire for privacy and the use of IT to provide information which no one set of rules can fully resolve.

The sophistication of today's IT makes it so easy and painless to collect data about us and our activities that if used without "due care and attention", it threatens to invade our privacy. What will tomorrow's IT bring? We give information about ourselves when undertaking so many transactions. When we open a bank account, make an appointment to see a doctor, order a book, or buy an airline ticket, register for a library card, or sign up to receive an electronic journal. We say where we live, who with, how much we earn, what we like to buy, read, where we visit … The list is endless. And the potential for misuse of that information grows daily.

Information given once can be used many times and in many combinations with the use of new technology. The implications of control to avoid misuse are a challenge to us all both as data subjects, the person to whom data refers, and as data controllers, any person or body determining the purposes and the means of the processing of data. As librarians we have to consider the conflicts between privacy, the potential for abuse of IT systems and the effective and efficient delivery of free access to information.

I have been asked to look at some of the issues relating to privacy and the responsibilities of libraries, highlighting in particular the European Directive on Data Protection and the possible impact on privacy of Electronic Copyright Management Systems (ECMS).

What I hope to achieve in this presentation is to impart some knowledge by outlining some of the European legislation, obviously from a UK perspective, raise some of the conflicts between Privacy and the use of IT and to make you think how you might wish to deal with them in both your private and your work life. One thing is certain, to do our jobs effectively in the future we have to know about the issues.

Data protection in Europe

The development of a frontier-free Internal Market and of the so called "information society" will increase the cross-frontier flows of personal data between Member States of the EU. In order to remove potential obstacles to such flows whilst maintaining a high level of protection within the EU, it was necessary to harmonise data protection legislation. The European Commission also engages in dialogues with non-EU countries in order to ensure a high level of protection when exporting personal data to those countries. And it initiates studies on the development on European as well as international levels on the state of data protection.

The EU legislation also came about because although national laws on data protection aimed to guarantee the same rights, some differences existed. These differences could create potential obstacles to the free flow of information and additional burdens for economic operators and citizens. Some of these were: the need to register or be authorised to process data by supervisory authorities in several Member States, the need to comply with different standards and the possibility to be restricted from transferring data to other Members States of the EU. At the same time some Member States did not have any laws on data protection.

So, just to repeat, the harmonisation of data protection rules in the EU aims to achieve the free movement of information, including personal data, between Member States whilst at the same time ensuring a high level of protection for any person concerned. The resulting legal framework is found mainly in Directive 95/46/EC ("the Data Protection Directive"), adopted on 24 October 1995, dealing with the protection of individuals in the processing of personal data and the free movement of such data. Member States were required to give effect to the Directive within three years of its adoption, i.e. by October, 1998.

European Legislation

European Directive on Data Protection 95/46/EC – 1995.
Harmonisation of EU Directive amongst EU Member States – 1998.
UK Data Protection Act 1998.

European Directive on Privacy in Telecommunications 97/66/EC.
European Convention on Human Rights.
UK Human Rights Act 1998.
European Directive on Copyright 2001.

The Data Protection Directive applies to 'any operation or set of operations which is performed upon personal data,' called 'processing' of data. Such operations include the collection of personal data, its storage, disclosure, etc. and personal data is anything that can identify you as an individual. The Directive applies to data processed by "automated means" e.g. a computer database of customers, and to data that are part of or intended to be part of non automated 'filing systems' in which they are accessible according to specific criteria. For example, the traditional paper files, such as a card file with details of clients ordered according to the alphabetic order of the names. It is format or carrier neutral.

The Data Protection Directive does not apply however to data processed by individuals for purely personal reasons or household activities (e.g. an electronic personal diary or a file with details of family and friends). It also does not apply to areas such as public security, defence or criminal law enforcement, which are outside the competence of the EC and remain a national prerogative. National legislation generally provides protection for individuals in these areas.

So when it is a matter of "National Security" or criminal law enforcement what protection does the individual really have about the use and access to personal data held about them? Not very much is the answer. What are your thoughts on the following? As librarians in charge of large, easy to access data files about people's reading habits or whereabouts, when it is a matter of national security where do our responsibilities lie? Monitoring of any use of the internet by individuals in libraries will produce further dilemma. For example, yes that person did take out a book on fertilisers and its alternative uses on a particular date. Did they then go on to put that knowledge to illegal use? What should you do?

What can you do? What can you not do? When examination of an issue system might prove one way or another where an individual might have been. These are serious things for us to think about and to consider the long term effect on our relationship with our users.

The data protection legislation has 8 aims listed as principles.
The Data Protection Principles

1. **Personal data shall be processed fairly and lawfully.**
   Regard is to be had to the method by which they are obtained, including in particular whether any person from whom they are obtained is deceived or misled as to the purpose or purposes for which they are to be processed.

2. **Personal data shall be obtained only for one or more specified and lawful purposes, and shall not be further processed in any manner incompatible with that purpose or those purposes.**
   Regard is to be had to the purpose or purposes for which the personal data are intended to be processed by any person to whom they are disclosed.

3. **Personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed.**

4. **Personal data shall be accurate and, where necessary, kept up to date.**

5. **Personal data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes.**

6. **Personal data shall be processed in accordance with the rights of data subjects under this Act.**

7. **Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data.**

   Having regard to the state of technological development and the cost of implementing any measure, the measures must ensure a level of security appropriate to-

   (a) the harm that might result from such unauthorised or unlawful processing or accidental loss, destruction or damage as are mentioned in the seventh principle, and
   (b) the nature of the data to be protected

8. **Personal data shall not be transferred to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data.**

Issues for Librarians and Information Workers

I see the issues as the conflicts of interest that may arise between the rights of privacy of individuals – Data Protection, the need to control the IT applications delivering services using personal data about individuals – management of technical processes and the desire to make use of all that information – Freedom of Access to Information.

Where are some of these conflicts, some have been mentioned previously, and what are our responsibilities as Librarians? Certainly conflicts arise in the following areas:-

a) Use of personal data held in Membership Files
b) Provision of access to the Internet
c) Copyright

Membership Files

Under Data Protection Principles librarians need to be aware of:-

- the purposes for which personal data is held
- that it is adequate, relevant and not excessive
- that it needs to be accurate and updated regularly
- that it should not be kept for longer than is necessary
- that appropriate technical and organisational measures should be taken to stop unauthorised processing, accidental loss etc. or damage to data.

In our role of providing access to information we may want to offer "tailored" services to users, especially in the workplace and academic library sectors. We live in a world where we are constantly having to justify our existence and provide figures to support it. We want to ensure that we provide what users want and that they use our services rather than those of someone else. So we might want to provide for example, alerting services to users who like to read a particular type of fiction or certain authors – if you like this then you may like that, students studying certain topics and researchers, etc. Amazon.Co highlight products similar to those of your last order when you next access their database. The technology is there, this is an easy number crunching exercise matching two different types of data – you the individual with the items you have borrowed. Store cards exist to keep information on our purchasing habits to anticipate and tempt future business, not for the customer's convenience.

But when does this become an invasion of privacy? Is it when the "mail shot" becomes too invasive by providing too many alerts, when the topics extend to facts that we had not considered, e.g. connected to an item borrowed, but actually not found to be appropriate or are about a topic that really is no one else's business? When are we as the third party possessors of this information placed in a dilemma because of our knowledge of that information? Is it when records show a trend in information gathering on Euthanasia by someone in their 70s, or on child abuse by a 16 year old? When does this become a paid for service that individuals who can afford to, buy into? Rich student versus poor student?

Internet Access

As librarians I think it can be said that we are committed to the widest possible freedom in the dissemination of information. In the UK, Government has a policy of providing access to the Internet in every Public Library that is free of charge at the point of access. The aim of the Government policy is to lessen the divide between the Information Rich and the Information Poor. In the UK we have no general right of access to information and Data Protection is closely linked to Freedom of Access to Information. Consequently, the role of the library and information service is essential to enable individuals to enjoy comprehensive access to the widest range of information.

As I have just said, traditionally there have been no constitutionally protected rights guaranteeing freedom of access to information, a right to freedom of speech for example. However the Human Rights Act 1998 has incorporated the European Convention on Human Rights into domestic law. From 2 October 2000, every British citizen can take any organisation to a British court for breaching their rights. In particular, the right to privacy (Article 8) is considered to be one of the most sensitive areas – every citizen has the right to protection of family and private life. This has to be balanced against a right to freedom of expression (Article 10). Library and information services therefore need to be informed about their responsibilities under this legislation and be aware that their policies may be subject to challenge.

Library and information services may decide to monitor Internet use to help them ensure or prove that they are fulfilling their legal and other obligations. Monitoring may help to enforce policy and act as a deterrent to inappropriate or illegal use. But any use of monitoring systems has to be made clear to users. Again, the library and information service will need to ensure that its monitoring is not inconsistent with its legal obligation under Data Protection legisiation and other safeguards of user confidentiality and privacy. What personal data needs to be collected for monitoring purposes and would this invade an individual's privacy?

Before providing Internet access and services for users, library and information services should have clear policy statements and guidelines in place. Such policies should make clear the duties and responsibilities of users (they have them too!) by reminding them, for example, of their legal obligations and stating what constitutes acceptable use and behaviour in a library setting. However, libraries need to take care that their policy on acceptable use does not unnecessarily or unintentionally restrict the legitimate needs and interests of their users.

The issues around the use of filtering software are complex and contentious. A desire to protect children from exposure to illegal or harmful material when using the Internet may conflict with the right of privacy that an adult may expect to access material that is legal and not harmful to them. Under their Code of Professional Conduct all members of the UK Library Association are obliged to "facilitate the flow of information and ideas, and to protect and promote the rights of every individual to have free and equal access to sources of information without discrimination and within the limits of the law". (One to think about if we had more time!)

EMAIL

Also with the provision of access to the Internet comes the thorny problem of Email! As more and more information business is carried out digitally this is just as much an "employment" issue for librarians as managers as it is as part of Internet access for individuals. As both employer and employee you need to know about the following:-

Instant communication with a global audience and at almost no cost has made e-mail an essential tool for business. But the ability to send messages around the world at the touch of a button has brought its own problems. These include:- attracting negative publicity, increasing employers' liability to actions for defamation, racial or sexual harassment and increasing the potential for employees unintentionally to create contractual commitments for which their employers may be responsible.

In the UK some complex pieces of legislation inter relate. The Data Protection Act 1998 and the Regulation of Investigatory Powers Act 2000 (RIPA) are the main pieces of legislation governing interception and monitoring of e-mail. RIPA establishes the principle that communications must not be

intercepted without consent. And as a general rule, providing that the lawful interception of communications over public networks or private networks linked to the public network, should be based on the consent of both the sender and the intended recipient of the e-mail.
But the Secretary of State has powers of exception. They both provide for criminal and civil liability.

So, regulations made under RIPA set out the general circumstances under which monitoring and interception are permitted, while the Data Protection Act, regulating the use of personal data, determines whether or not monitoring or interception can lawfully take place where it involves the processing of personal data.

Then the Human Rights Act 1998 guarantees rights of privacy and Public authorities may not act in a way incompatible with an individual's right to have respected private and family life, home and correspondence.

So, organisations can monitor – but not record – communications to establish whether e-mail is relevant to their business. But they must make reasonable efforts to inform every person who may use the e-mail system that their communications may be intercepted.

With employees, this may be done through e-mail policies set out in staff handbooks, compliance with which should be based in the employment contract. For all third parties (recipients), a statement automatically printed on the bottom of each outgoing e-mail is recommended. Sometimes the disclaimers are longer than the email! Employers should also make known to their employees the consequences of breaching the e-mail policy and ensure that the policy is enforced whenever breaches come to their attention.

Copyright

With the provision of electronic document delivery comes the conflict between access and copyright considerations – media copyrights, author rights, access control and payment for digital multimedia material. The sophistication of the technology which enables almost instant delivery of documents, as they say anytime, any place, anywhere, is being utilised to provide an effective solution adding extra protection to Copyright laws. The EU Directive on Copyright became law in June 2001 and this time Member States have only 18 months to incorporate the Directive into National legislation.

The widespread use of electronic technology to produce, store, manipulate and distribute information of all kinds and the arrival of digital technologies for handling text, sound and visual images has opened up many possibilities for use but poses serious questions about copyright. The different players involved (authors, publishers, distributors, intermediaries and users) all have different, yet interdependent, requirements of the copyright system. A balance needs to be maintained between the different interests. The implementation of Electronic Copyright Management Systems (ECMS) can go some way to achieving a balance although even these cannot achieve total control and an element of trust is always needed.

Electronic Copyright Management Systems are technical solutions such as encryption, tagging, digital fingerprinting, data identifiers, watermarks. What they do is track and control the movement of works in digital forms. Ultimately they can prevent unauthorised access to prevent piracy etc. But in order to achieve this, personal data must be given in return. So a document, barcode or watermark information is supplied with an encryption stating that it is supplied by "x" organisation to "y" person giving their name, address, date, and saying whether payment has been made, "copyright cleared with royalty paid".

The technology is sophisticated enough to track use and identify users, and for librarians ECMS will mean setting up systems to track and record document usage, mechanisms for charging, mechanisms for access control, clearance requests and overall copyright management. All of which will cost money and create the potential for misuse.

An example of a European Developed ECMS system is
CopySmart (a software and PC-card with a smart card reader to be inserted into a PCMCIA connector)

The consortium, named CopySmart, initiated by the French smart card manufacturer Gemplus includes Euritis (France), Phoenix Technologies Ltd. (UK), British Library (UK), Bureau van Dijk (Belgium) and the Open University of the Netherlands.

CopySmart is conceived for publishers, fee collecting companies, licensing agencies, distributors, libraries and universities which give access to end users to any type of electronic documents: basic objects (image, sound, text) and complex objects (applications, data bases, multimedia works …) in an off-line (e.g. CD-ROM) or on-line (e.g. Internet) environment.

Implementation of legal clauses registered together with authors and publishers, gives a controlled access to any digital information in “a completely trusted” environment. But in order to participate as a TTP – Trusted Third Party, or to negotiate permission to carry out an exception you have to identify yourself, i.e. hand over personal data. It's a big element of trust!

Others systems include:-
COPICAT
CITED
COPEARMS
IMPRIMATUR

In most cases existing laws and practices provide an adequate framework for the development of Electronic Copyright Management Systems. Eventually an ECMS may be capable of assisting in the identification of copyright owners, the acquisition of any acquired rights and permissions, the application for registration of claims to copyright and the recording of copyright documentation with the Copyright Office, and the collection of royalty payments.

Conclusions

For librarians the “digital revolution” is double-edged. It offers opportunities, almost on a daily basis, to improve information services by faster delivery, more efficient retrieval and solves “basement storage” problems overnight! But it also leads us to question the responsibilities that librarians have as gate keepers to the riches of that revolution. We have an expectation that new technology will be used to improve services for the good of society. The problems start when we acknowledge that those controlling the new technology and the data it can hoard may not be so scrupulous. Legislation set up to combat the unscrupulous then causes further dilemma.

The conflicts and issues bought about by the desire to protect our privacy and at the same time maximise the use of technology are something we have to keep talking about. As a profession we have to show that we are responsible in the delivery of our services, that we are aware of the rules and regulations and that we are willing and able to educate users about the issues. The access that new technology gives us to information has a price – it is the give away of personal data and it will drastically change our relationships with users. What I hope this presentation has done is to raise your awareness of the issues and the importance of your contribution to the debate.

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Licensing Issues for Central and Eastern European Libraries

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Abstract:

Licensing for any library can be complicated but when you are also dealing with a different culture and language, it can become even more complex. The speaker will outline the challenges that Central and Eastern European librarians have met and some of their solutions.

1. Introduction

Licensing of electronic resources is not a totally new topic for libraries. Libraries, particularly research and academic libraries were faced with licenses already several decades ago, when access to online databases was first offered either by hosts such as Dialog, or commercial databases were acquired on tapes for in-house implementation. Central and Eastern European (CEE) countries took part in that development; in Slovenia (which was at that time still a part of Yugoslavia) databases like INSPEC, COMPENDEX, etc. were for example first available in the early 70's.

Late 90's brought an unprecedented development of electronic resources both in variety and quantity. Worldwide more and more information is offered by different providers (publishers) in the form of electronic resources ranging from bibliographic databases to full-text electronic journals and Web pages. For the first time libraries of all types and sizes are acquiring electronic resources or access to resources and consequently they are faced with new kinds of complex business arrangements with information providers.

The use of electronic information is defined and described by contractual agreements with information providers. These agreements are usually called licenses. Libraries continue their traditional role as mediators between users and information providers, this role persists even more energetically for electronic information than for print, as mentioned in the IFLA press release[1] announcing the approval of licensing principles.

Because of its importance as a means of gaining access to commercially available digital information, licensing was and still is the focus of many discussions. As the result, libraries now have guidelines to help them negotiate.. Two recent examples can be mentioned: IFLA Licensing Principles[2] and Memorandum of Understanding[3] of TECUP project. The latter is an important achievement, because it is a result of mutual discussion of all partners involved.

The Executive Board approved IFLA licensing principles in March 2001. In the introduction, the need for effective, well-balanced national copyright legislation is emphasised, "not only to recognise the copyright owner's need for remuneration and recognition, but also the critical purposes of public information, education and research. This balance,..., must find expression in all information resource licenses". Among principles, the most important are:

- Licence terms and conditions must be fully available to customers in advance and every license is subject to discussion of terms and to negotiation
- Licenses should not exclude any statutory rights granted by applicable copyright law
- Licences should be negotiated and written in the primary language of the library customer
- The licence should balance the rights and responsibilities of both parties

Additionally, education of users about proper use of electronic resources is stressed, as well as fair pricing in order to encourage use. Provisions for interlibrary loan, support for local teaching and distance learning have to be included as well.

The TECUP Memorandum of Understanding has a similar aim: "to facilitate access to electronic content and promote cost effective use by encouraging simple and workable solutions". It lists the contents of a typical license agreement:

- Access for all authorised users irrespective of their location
- Access to walk-in users on-site
- Unlimited viewing, downloading and printing for non-commercial, educational and scientific purposes
- Interlibrary loan

A list of issues for future cooperation is added: electronic interlibrary document supply, cross searching, rights management systems, continuing access and long-term archiving, development of new business models. On these subjects, a mutual consensus was reached.

"Consortium" is another term closely associated with acquisition of electronic resources. A library consortium is a group of two or more libraries that have agreed to cooperate in order to achieve a common objective. Of course libraries have formed consortia in order to cooperate long ago; over 100 years ago the first library consortia were formed in the United States[4]. In the beginning libraries worked together in collection development and resource sharing, later consortia for cooperative cataloguing were organised. Over the last decades several consortia were formed around automated systems and use of information technology. Recently, libraries are again forming consortia to acquire electronic resources. It has to be mentioned, though, that the term "consortium" is used to describe very different things: from informal groups of cooperating libraries to formal organisations, based on contracts and with an organisational structure.

2. Project CELIP

Project Central and Eastern European Licensing Information Platform (CELIP) is coordinated by EBLIDA (European Bureau of Library, Information and Documentation Associations) and funded by the European Commission, DG Information Society. It started in November 2000 and its main goal is to support the development of the professional skills of librarians in CEE countries. Librarians of 10 countries are participating: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

During the project, workshops will be organised in all participating countries. The objective is to raise awareness of librarians about the implications of licensing issues when providing electronic services. This action will build upon the preceding projects ECUP (European Copyright User Platform)[5], ECUP+, and CECUP (CEE Copyright User Platform)[6]. Further discussions on user rights in the electronic environment will be organised with librarians and right owners in CEE countries, using here the good results of initial contacts established under CECUP. National representatives will be targeted. Use of the CECUP position paper on licensing principles and other licensing models will be encouraged as a code of good practice when negotiating licenses. The pan-European Focal Point (Website and e-list) for copyright & licensing questions, as well as information on EU legislative developments will be promoted. The current position of CEE libraries with regard to licensing will be discussed.

A Steering Group was established, consisting of representatives of all the participating library associations, to act as the network core and national licensing information will be disseminated actively a the international level.

The milestones and expected results are:

- A report on the licensing situation in CELIP countries.
- Ten licensing workshops in the CELIP countries, after which awareness about national and international licensing issues and developments will be substantially higher.
- Negotiations with right owners to obtain a better mutual understanding.
- International awareness about the project and its results. Liaison with TECUP project.

At the beginning of the project a survey of the licensing situation in participating countries was made. The preliminary report [7] was prepared by Tuula Haavisto, CELIP project coordinator. Some of the results are tabulated below.

Table 1 shows the rough estimations of the usage of electronic materials in CEE libraries. The informants point out, that the numbers are really estimates; few countries have reliable exact data and some have not yet provided any data.

Table 1: Use of electronic publications

Which % do use this media type (estimation)	CD-ROMs & multimedia works			Electronic full-text journals			Electronic bibliographic databases		
	Acad. Libr.	Public Libr.	Spec. Libr.	Acad. Libr.	Public Libr.	Spec. Libr.	Acad. Libr.	Public Libr.	Spec. Libr.
Bulgaria	80%	10%		50%	10%		50%	10%	
Czech Republic									
Estonia									
Hungary	90%	80%	90%	60%	Low%	40%	90%	40%	40%
Latvia									
Lithuania	100%	80%	100%	100%	30-40%	100%	>90%	20-30%	>80%
Poland									
Romania*	40%	10%	30%	20%	10%	n.a.	50%**	20%**	30%**
Slovakia	90%	30%	70%	90%	20%	70%	90%**	20%**	80%**
Slovenia	100%	60%	60%	70%	10%	20%	70%	10%	30%

* concerning Romania, the amounts are excluding the eIFL Direct programme, which is widely used.

** the amounts of libraries using electronic databases refers mainly to free-of-charge electronic databases.

Table 2: Licensing agreements

Do single libraries make licensing agreements conc. This material?	CD-ROMs & multimedia works			Electronic full-text journals			Electronic bibliographic databases		
	Acad. Libr.	Public Libr.	Spec. Libr.	Acad. Libr.	Public Libr.	Spec. Libr.	Acad. Libr.	Public Libr.	Spec. Libr.
Bulgaria	yes	yes	-	no	no	-	no	no	
Czech Republic									
Estonia	yes	-	yes	yes	no	yes	yes	no	yes
Hungary	yes	no	yes	yes	no	yes	yes	yes	yes
Latvia									
Lithuania	yes	few	yes	yes	few	yes	yes	few	yes
Poland									
Romania	yes	no	no	no	no	no	no	no	no
Slovakia*	*	*	*	*	*	*	*	*	*
Slovenia									

* some libraries in **Slovakia** have made occasional single agreements

Table 2 shows that many libraries in CEE countries have been exposed to licensing.

Licensing consortia are becoming more and more common in CEE countries. The use of licensed electronic material began in many cases in individual libraries, which made single agreements with vendors. The idea of joining forces awoke in those cases very easily, and led to several small consortia, each around one vendor and its material. Another model is to add licensing matters to the agenda of an existing consortium, which usually have been born around cataloguing. The third start model is to form a consortium thanks to an initiative from a vendor.

3. Examples of licensing agreements in CEE countries

3.1 Consortia in the Czech Republic

As described by Pilar[8], the situation in the Czech Republic regarding library consortia is typical for CEE countries. The term "consortium" is not used in the Czech legal system, although (under provisions for associations) "a number of bodies can associate in order to jointly achieve an agreed objective". Consortia are therefore founded as open associations of information services mostly in order to provide access to expensive information sources under better conditions than those available to individual organisations.

The process started in the late 90's and therefore there is not much experience either in the formation of consortia or selection of information providers and products. The author states that the lack of experience in licensing and lack of long-term funding guarantee are the most important obstacles for library consortia.

The author lists some examples of consortia, organised for access to information resources:

- EIFL-Direct (EBSCO electronic journals)
- TAMTAM database users (Czech newspapers and databases by Anopress)
- Web of Science (ISI databases)
- Science Direct (Elsevier journals)
- OCLC FirstSearch
- CrossFire Beilstein
- COMPENDEX, INSPEC, Metadex, ICONDA databases
- MathSci
- ProQuest and PCI Web
- BIOSIS

Some of the consortia are managed by the National Library, others by the Library of the Academy of Sciences and universities.
After describing some very successful consortia a list of problems is added:

- Insufficient exchange of information between consortia
- Lack of organisational platform for co-ordination of present activities and preparation of new ones
- Lack of integration of acquired electronic resources with library catalogues and other bibliographic databases
- Absence of long-term policy of funding bodies (government)
- Systematic evaluation of acquired electronic resources and their use and user feedback

3.2 eIFL Direct programme in CEE countries

eIFL Direct programme (Electronic Information for Libraries) is a project of the Open Society Institute (OSI, or Soros Foundation), which offers a platform for the use of electronic material. OSI in Budapest has negotiated on behalf of all the 39 countries where OSI is active, a framework licensing agreement and price level with EBSCO. eIFL is available in all CELIP countries. The agreement covers access to six databases: Academic Search Elite, Business Source Premier, Newspaper Source Plus, MasterFILE Premier, Comprehensive MEDLINE Plus Full-Text and Health Source Plus - all in all over 3.200 journals primarily in the social sciences and humanities. Newspapers, pamphlets, and a small range of full-text reference books are also included. The material can be accessed via the web or in CD-rom/DVD-rom formats.

In the beginning there was come criticism regarding the selection of the material available, which was originally offered as a ready-made package. For the year 2001, the participating libraries can send their proposals for the journal selection. E.g. some Romanian libraries wished more mathematical-technical journals, and this led to a positive result.

OSI offers this material to be used in different publicly financed libraries, and in other non-governmental organisations supported by OSI. The concrete arrangements must be done and the fee to EBSCO must be paid in each country separately. In some of them the government is paying for all the concerned libraries, in some other countries the payment is collected from the libraries. In most countries libraries have founded consortia to manage their eIFL resources.

A special feature of the eIFL Direct programme is that it is open for public libraries as well. Thanks to this, public libraries in the concerned countries are nowadays more experienced in licensed web material than their counterparts in most Western European countries.

The positive impact of the programme could be seen in the first CELIP workshop in Bucharest in April 2001. It has given more concrete awareness of electronic resources, and the CELIP information had better possibilities to be absorbed. The reaction in Romanian libraries towards eIFL has been very positive. The same can be said for the Czech Republic: according to Pilar especially students get oriented very fast in search process and require no training.

OSI provides also a training programme for librarians in use of electronic resources. The second round of training began in April 2000.

Table 3: The usage of eIFL in the CELIP countries

Country	Number of part. libraries in 2000	Number of part. libraries in 2001 (situation 2/2001)	Who is paying for the material
Bulgaria	50 out of the 71 user institutions	Under negotiation	2000 - OSI/BG 2001 - libraries
Czech Republic	Countrywide	Countrywide	Government
Estonia	9	12	Libraries
Hungary	N.a.	N.a.	N.a.
Latvia			
Lithuania	33	33	OSI/Lithuania, government, libraries
Poland			
Romania	100% of univ.40% of public, 80% of spec.libr.	100% of univ., 60% of public & 80% of spec.libr.	The participating libraries
Slovakia	101	150	The libraries*
Slovenia	60	60+x	Government

* in **Slovakia**, there are plans to find common resources from two ministries and from the State Fund of Health.

4. Conclusions

Any attempt in making a short and simple summary of the licensing situation in all consortia in all CEE countries would result in extreme over-generalization. There are specific problems and the situation is definitely not identical in all cases. On the other hand there are some common traits that can be listed, particularly:

- Fast development of technology makes long-term planning difficult both for information providers and libraries
- Lack of experience in licensing
- Lack of experience in dealing with foreign partners, including difficulties due to language (mostly English), and different law traditions in licensors' and licencees' countries
- Lack of experience in tender preparation
- Instability of the electronic resource market (vendors merge or change ownership, changes in marketing policy…)
- Lack of long-term commitment of funding bodies (mostly government) and lack of financial stability of libraries in general

Libraries cannot influence or solve all of the listed problems. It is therefore necessary to focus on the areas of licensing and contracts with foreign companies. It can be expected that more and more lawyers in CEE countries will specialise in that area, so libraries will be able to get help in legal matters. Another important issue is education of librarians in licensing matters. Projects like CELIP are a step in that direction. Library schools will have to include that topic into their curricula and programs of permanent and continuing education.

Librarians have to learn that they are equal partners in the negotiation process and they do not have to accept all terms set by the vendor. Both IFLA Licensing Principles and TECUP Memorandum of Understanding will be very helpful in that. Additionally, exchange of information on licensing agreements both nationally and internationally could provide good examples and guidance in negotiations.

Finally, where access to information is included into the national information society policy (e.g. Czech Republic, Slovenia), libraries gained better government support for acquisition of electronic resources.

References:

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International Federation of Library Associations and Institutions

Activities & Services

Discussion Group on Information and Documentation at Boston

Sunday 19 August 2001, 13:00-14:30

We invite you to attend this meeting during the IFLA General Conference at the Hynes Convention Center in Boston.

As you may know, the International Federation for Information and Documentation/Fédération Internationale d'Information et Documentation (FID) has in practice ceased to exist. Please refer to the Open Letter on IFLA and FID.

IFLA remains willing to do whatever is appropriate to enable former FID members to continue their interests and their contributions to improving the quality of information systems. FID has achieved a great deal since its establishment in 1895. It would be sad if there was no way for its distinctive contribution to continue.

The purpose of this meeting is to discuss and consider which possibilities there are to continue any professional activities that were previously taking place under FID's umbrella.

Ms Kirsten Engelstad who is the Director General of the National Office for Research Documentation, Academic and Special Libraries in Oslo, Norway has kindly agreed to chair this important meeting.

Latest Revision: *Juney 21, 2001*

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67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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Convening Notice of the 67th IFLA Council Meeting

To: Voting Members of IFLA

Date: June 2001

Please forward these documents, including your IFLA Voting Card, to your voting delegate who will attend the IFLA Council to be held in Boston, USA on Sunday 19th August and Friday 24th August, 2001

The Executive Board of IFLA has pleasure in submitting this convening notice of the 67th Council meeting of the Federation.

The Council will meet at the Hynes Convention Center, Boston, Massachusetts, USA, on Sunday 19th August 16:00 - 17:30 and Friday 24th August 15:00 - 17:00

Ross Shimmon
Secretary General

AGENDA

Council I: Sunday 19th August 2001, 16:00

1. Opening by the President, Christine Deschamps
2. Adoption of the Agenda
3. Minutes of the previous meeting, held on 13th and 18th August, 2000
4. Communication by the Boston Organizing Committee

5. Appointment of Tellers
6. Formal Announcement of the results of the Postal Ballot for the election of President-elect and for places on the Governing Board.
7. Presentation of the Annual Report by the Secretary General
8. Tribute to Birgitta Bergdahl
9. In memoriam: Council will remember those colleagues who have died since the last meeting
10. Presentation of the Annual Accounts 2000 by the Treasurer
11. Proposals for new categories of membership by the Treasurer
12. Report by Adolfo Rodriguez on the work of the Advisory Group on the Division of Regional Activities.
13. Adjournment of Council until Friday 24th August.

Council II: Friday August 24th 2001, 15:00

14. Opening by the President, Christine Deschamps
15. Motions and Resolutions (see notes below)
16. Members scheduled for deletion for non-payment of membership fees
17. Evaluation of the Conference and of the Professional Activities, by the Chair of the Professional Board
18. Announcement of results of elections to the Professional Committee
19. Announcement and Presentation of Awards
20. Announcement of invitation of expressions of interest to host the general conference in 2007
21. Invitation to the general conference in Berlin, 2003
22. Invitation to the general conference in Glasgow, 2002.
23. Votes of thanks by the Treasurer.
24. Closure of the Conference.

NOTES

1. Voting will take place on agenda item 11, Proposals for new categories of Membership, during Council I. Voting may also take place during Council II on any motions and resolutions submitted.
2. Voting delegates should take their seats in the designated area in the front of the hall.
3. Voting delegates are representatives of those International Association Members, National Association Members and Institutional Members who have paid their membership fees for 2001.
4. Personal & Student Affiliates are invited to the Council meetings,

but they do not have voting rights. Therefore, they do not receive voting cards.

5. **Voting Papers:** Voting delegates can obtain the necessary voting papers at the IFLA Voting Office located in the Registration area of the Hynes Convention Center. Voting papers will be distributed only to those delegates who are in possession of the IFLA Voting Card, duly signed by the appropriate authority. The IFLA Voting Card is enclosed with these documents. Voting Members who had not paid their fees for 2001 at the time of despatch of these papers, but who pay subsequently, will receive their voting cards later. Late payments may be accepted during the conference at the Voting Office, in which case, the voting cards may be collected at the same time.
6. **The Voting Office** will be open on Friday 17th August from 14:00 - 18:00, Saturday 18th August from 09:00 - 18:00 and Sunday from 09:00 until 16:00.
7. **Please collect your voting papers as early as possible. Please do not leave it until the last minute!**
8. If necessary, the Voting Office will open from 13:30 - 15:00 on Friday, 24th August.
9. **Representation:** the relevant articles of the IFLA statutes and Rules of Procedure are as follows:
   - Statute 15.1.1 Each Member is entitled to be represented at Council by one or more representatives. One such person shall be designated by the Member to exercise the right to vote.
   - Statute 15.8.1 Each Member may be represented at a Council Meeting by another Member. Such Member may exercise proxy votes on behalf of the Members they are representing.
   - RoP 5.2.3 To obtain these [voting] papers, representatives, or proxies of qualified Members shall present themselves at the time and place as publicly announced at the Voting Office with the membership certificate [IFLA Voting Card] of the member concerned, which certificate [IFLA Voting Card] shall carry the name of the representative or proxy, and the signature of the competent authority of the Member concerned.
10. **The deadline** for submitting motions and resolutions to the Secretary General is **Wednesday 22nd August, 12:00**.
11. **Motions:** According to the Rules of Procedure (Rule 2.1.9), a Motion is a proposal that the Council take certain action or that it express itself as holding certain views. A motion must be seconded. A motion may be made from the floor in a Council meeting, but

must at the same time be handed over in writing to the Chair. A motion may be made and seconded by:

- Authorised representatives of Members
- IFLA Officers [Members of the Executive Board and Professional Board, Directors and Officers of Core Activities, Chairs, Secretaries and Treasurers of Divisions, Chairs and Secretaries of Sections and Round Tables]

12. **Resolutions:** two types of Resolutions are distinguished in the Rules of Procedure (Rule 2.1.10): general resolutions and professional resolutions.
    - **A general resolution** is defined as a written statement aiming at a decision (be it resolved that ..."). Such resolutions can be made by authorised representatives of Members and IFLA Officers (see definition in Note 7 above) only.
    - **A professional resolution** is defined as a written statement indicating an intention or a position which needs further clarification by one of IFLA's profesional steering bodies before any follow-up can be expected. A professional resolution needs no seconder and can take any form. No discussion normally follows acceptance of a professional resolution, although clarification can be sought and provided at the discretion of the Chair. A professional resolution may be submitted by authorised representatives of Members, or persons acting on behalf of the Core Activities, Divisions, Sections, or Round Tables.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	056-98-E
Division Number:	V
Professional Group:	Reference Work
Joint Meeting with:	-
Meeting Number:	98
Simultaneous Interpretation:	-

E-mail Reference: Refocus and Revise. Experiences from Gelman Library

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The term "virtual reference" has emerged as the latest catchphrase within the library profession. The frequency in which this topic appears in the library literature, listservs, and conference programs reflects the serious interest among librarians. While definitions vary, there is general agreement that virtual reference includes providing reference assistance through the use of e-mail or chat room software, also referred to as live reference. Although recent attention to virtual reference has focused on live reference services, it is worthwhile to take a closer look at what may be construed as the predecessor this service, e-mail reference. This paper will provide an overview of a recent assessment of Gelman Library's e-mail reference service, highlight recent revisions made to the service, and address the impact of those changes.

Gelman Library, George Washington University's main library, launched an e-mail reference service in the spring of 1996. Overall, the number of e-mail questions received was quite low. In August of 2000, an assessment of the e-mail reference service was initiated. Two reference librarians assigned to monitoring the service conducted the assessment with the assistance of the library's Webmaster. The objective of the assessment included an evaluation of the current status of the service to determine what revisions needed to be made to increase the number of patrons that used the service. Although general statistics had been maintained to track the number of e-mail questions received in the past, the data offered little insight into why the service failed to attract interest.

Therefore, the first step in assessing the service was to collect benchmark data. The following data was tracked from August 2000 through January 2001 1.) Date and time question was sent; 2.) Patron affiliation with the university (faculty, student, staff, or other); 3.) Subject of the question; 4.) Number of e-mails sent before the question was resolved; 5.) Approximate time spent by the librarian responding to the question, and; 6.) Type of question based on categories used at the Reference Desk (ready reference, extended reference, directional, or other).

The second step in assessing the e-mail reference service involved revisiting earlier decisions made when the service was initially designed. The historic context of e-mail reference services across all libraries served as an appropriate starting point. When e-mail reference services were first introduced in the 1980's, librarians were concerned that they would be inundated with e-mail questions. As a result, the service was often buried deep within a library's web site. A second concern expressed by librarians was that the reference interview and question negotiation would be compromised. As a preventive measure, many e-mail reference services were limited to factual questions and inquiries regarding library services.

The design of Gelman Library's e-mail reference service reflected these concerns. Accordingly, the following strategic design elements were incorporated into the initial design of Gelman Library's e-mail reference service:

- An obvious and direct link to the e-mail reference form was not available on the library's home page. The link that ultimately led a patron from the library's home page to the e-mail reference form was entitled "Ask Us."
- The e-mail reference form was three clicks from the library's home page.
- Upon clicking on "Ask Us,"' the patron was presented with a page offering multiple links to sources of reference assistance. One of the options was entitled "E-mail reference."
- When a patron finally reached the form, patrons were presented with restrictions on the types of questions that could be asked via e-mail reference. The service was limited to brief, factual questions. Other types of questions were to be addressed in person at the Reference Desk.

Looking at the design of the service from a patron's perspective, we speculated that perhaps patrons were not readily identifying that an e-mail reference service existed. Further, patrons may have been confused or discouraged by the restrictions placed on the type of questions that could be sent through the e-mail reference service. Therefore, the following revision were made to the e-mail reference service:

- The "Ask Us" link on the Gelman Library home page was changed to "Ask a Librarian" in hopes that patrons will associate this with our e-mail reference service.
- The "Ask a Librarian" link now leads directly to the e-mail reference form.
- When consulting with the Webmaster regarding the proposed layout, it was discovered that many patrons were sending e-mail reference questions to the Webmaster's link located at the bottom of the web site that invited patrons to send comments or questions regarding the web page. It was therefore decided more efficient to have e-mail sent through this link automatically forward the e-mail to the reference account.
- Restrictions were removed regarding the type of questions that can be asked. The new form invites states: If you have a question about using the library, need a specific piece of information, or aren't sure how to begin a research project, ask a librarian.
- The "Talk to a Librarian Now" section offers alternatives to obtaining reference assistance via e-mail, but is no longer presented as the primary focus of the page as was the case in the past.

The revisions were made to the e-mail reference service effective February 2001 and the results were astounding as the volume of e-mail reference questions received skyrocketed. Table 1 below reveals that the number of e-mail reference questions almost doubled between February and May when revisions were made to the service. Making the service more visible on the library's homepage, redirecting the e-mail sent from the Webmaster's comments link to the e-mail reference account, and removing restrictions as to the type of questions that were permitted proved to be a success.

Month	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
# Of E-mail questions received	27	47	39	30	30	25	53	62	69	66

It is difficult to determine if the use of this service increased more because of improved visibility on Gelman Library's web site or because restrictions were removed regarding the type of questions that could be asked. However, it is interesting to note the implications of the latter point. Eliminating the restrictions on the type of e-mail reference questions that could be asked reflects a change in the traditional way of offering reference assistance. Most academic libraries place few limits, if any, on the type of reference assistance that is offered to an in-person patron, while restrictions tend to be placed on virtual patrons who conduct their research from outside the library. In essence, in-person patrons were provided with preferential treatment. However, removing restrictions on the type of reference questions that can be sent through the e-mail reference service suggests that the distinction between the type of reference assistance that offered to the in-person patron and the virtual patron is becoming less important.

In the past, the way in which reference services have been designed suggests that librarians have perceived the virtual patron as different from the in-person patron. However, at the same time, libraries continued to make their resources available online, beginning with the catalog. Today, patrons have come to expect remote access to the library's databases and demand the ability to conduct other library transactions such placing interlibrary loan requests or renewing books. As libraries provide online access to their resources and services, it sends a message to patrons that research can be conducted outside the library. Therefore, it only makes sense to provide access to a librarian as well in this forum.

Traditional reference services must undergo radical changes in the near future to accommodate the needs and demands of the remote user. Refocusing and revising current reference services, such as e-mail reference, is one step in this direction.

67th IFLA Council and General Conference
August 16-25, 2001

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Professional Group: Reference Work
Joint Meeting with: -
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Applying Information Competency to Digital Reference

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Abstract:

This paper presents a case for applying information competency (IC) standards to digital reference services at academic libraries. Practical reasons for applying standards or guidelines to e-mail and online chat reference services are given with some insight to the nature of digital reference interactions. The standards that arose from the information competency movement in academic libraries are described and offered as a touchstone for planning and designing digital reference services. The paper concludes with preliminary ideas for how IC standards could be applied to the provision of digital reference.

Overview of Digital Reference Services

Libraries around the globe are exploring ways to offer reference service online. E-mail reference was the first service mode tried out, making its first appearance in the mid-1980s (Gray, 2001). Initially, libraries simply offered an e-mail address for users to send their questions to. Many libraries now require users to fill out a Web form in which they must provide additional information about their request that will help the responding librarians. Some e-mail reference services, such as the one at the Internet Public Library, use software to manage the flow of e-mail between user and answering librarian. A rapidly expanding number of libraries are now launching chat reference services (Francoeur, in press; Sloan, 2001). The first chat services only allowed for instant exchange of short messages between user and librarian, but now thanks to the development of increasingly sophisticated software, online interaction between patron and reference librarian has grown richer.

Taking advantage of software initially designed to assist online customer service, some chat reference services now make it possible for the user and librarian to synchronize their browsers so that whenever one person clicks on a link in their browser window to go to a new web page, the other person is led to that same page, too. Known as collaborative browsing or escorted browsing, this feature even allows one person to fill out a form on a Web page for the other, a trick that comes in handy for the librarian demonstrating to the user how to search databases.

Another form of digital reference that has been experimented with (though with less success) is video reference. Early projects showed some promise but were shelved due to a number of drawbacks, the most problematic of which was that the technology used to deliver these services really is not in widespread use yet and requires substantial bandwidth (Sloan, 1997, 2001). Given that e-mail and chat services are currently the most popular forms of digital reference, this paper will focus on the development of standards and policies for these two service points, particularly at academic libraries. We suggest that as librarians experiment with new digital reference services, they should consider the role that instruction plays in online reference interactions. One resource that may help in the planning and design of these new services are the recently created standards that attempt to describe what makes a person competent in the use of information.

Why Digital Reference Needs Standards

The Reference and User Service Association, a division of the American Library Association, has created many committees over the years to establish standards related to reference assistance. Notable examples include guidelines for writing manuals to be used in a cooperative reference service (Cooperative Reference Service Committee, Reference and User Services Association, 1998), guidelines for evaluating the behavioral aspects of the interaction between librarian and patron (Reference and Adult Services Division Ad Hoc Committee on Behavioral Guidelines for Reference and Information Services, 1996), and guidelines for the provision of information services (Standards and Guidelines Committee, Reference and User Services Association, 2000). Such standards establish a framework from which individual libraries can construct their own policies and guidelines.

As noted by Sloan in a 1998 article and as is still the case, there are not any guidelines from national library organizations about the provision of digital reference. As noted in the standards developed by the Reference and Adult Services Division (RASD) Ad Hoc Committee on Behavioral Guidelines for Reference and Information Services (1996), the policies they set forth are "primarily to deal with instances in which the patron and librarian are working face to face." The guidelines do note, though, that some of the suggested guidelines can "be adapted for [services offered to] remote users." We argue that more needs to be said about how these policies play out in the world of digital reference as it is practiced today. When the RASD guidelines were written, the concept of remote users of reference was understood to mean patrons asking questions via telephones, letters, faxes, or e-mail. With the recent rise of chat reference services, the picture is more complicated, and the issues more complex and pressing.

One such complication is that communication in the online environment (especially in chat) is different from face to face (lack of nonverbal cues, sense of temporal and physical dislocation, etc.) Much of what has been written about how to conduct a reference interview assumes that user and librarian are face to face. While there is a small body of literature about what the reference interaction is like in e-mail services, there has been little work yet on interactions in a chat service.

Second, the information landscape has changed considerably since the standards were written in the mid 1990s and is forcing librarians to rethink who their users are, what their users' information needs are, and how libraries can address those needs now. Much has been written lately about the changing roles for reference librarians in this ever-shifting landscape (Koyama, 1998; Lipow, 1999a, 1999b; Wilson, 2000). One way that librarians can work through the new issues confronting them is to develop guidelines and standards for these new digital service points.

For the library considering the launch of a new digital reference service, the exercise of designing standards for that service could be part of the planning process. It could be seen as a way of defining what the service will do, deciding what user needs will be met with it, and figuring out how that service will operate in the context of other modes of reference assistance available at the library (reference desk, telephone, office consultations, etc.)

Digital reference guidelines would also help ensure quality reference assistance by establishing baselines for service and thereby aiding staff training and evaluation. Guidelines will also be invaluable for libraries that form a consortia or informal alliances so that they can provide reference assistance to their combined pool of users, a point made by Kasowitz, Bennett, and Lankes in a recent article (2000).

The Information Competency Movement in Libraries

The Association of College and Research Libraries (ACRL) defines an information literate or competent student as someone who can "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1999.) With the explosion of information now readily available to students via the Internet and the Web (which includes both reliable and unreliable sources), students of all levels need to work toward a mastery of information literacy so that they can make informed decisions about what they decide to use.

The level of a student's information literacy (or, as we prefer to call it, information competency) has great impact on academic success. Beyond the immediate world of higher education, information competency also fosters career success, responsible citizenship, and lifelong learning in general. The path toward information competency does not end upon graduation from college or even graduate school but is an enduring process, one that empowers individuals to assume greater responsibility for their information seeking behavior and their learning.

In January 2000 the underlying principles of information competency were fully articulated into a set of five standards and twenty-two performance indicators; the final document is known as the ACRL Information Literacy Competency Standards for Higher Education (Association of College and Research Libraries, 1999). The five standards specify that an information literate student is able to:

- Determine the nature and extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically and incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose

- Understand many of the economic, legal and social issues surrounding the use of information and access and use information ethically and legally

The twenty-two performance indicators and outcomes describe activities associated with a student's demonstrated knowledge or understanding of the five standards. These standards can help librarians and instructors in discipline-specific departments decide what they want students to learn and on what to assess them. Many academic libraries have begun to incorporate these standards into the curriculum for their instruction programs and are actively redesigning the way they teach in workshops, course-related lectures, and library credit courses.

The real power of the ACRL standards, though, will become apparent as they start to move beyond the world of academic libraries and are adapted into an entire college curriculum. The movement in libraries to use the ACRL standards dovetails with a movement among some college accreditation agencies, such as the Middle States Commission on Higher Education, to require a comprehensive approach to information competency that pushes librarians, college administration, and discipline-based faculty to work together.

In the case of the Newman Library at Baruch College, the IC movement had already taken hold before the ACRL standards were finalized. A strategic plan for the library that was created in 1998 incorporated a set of IC standards developed by the State University of New York system, thereby paving the way for the adoption in the library of the ACRL standards. From the strategic planning process, the library came to recognize itself as a teaching library, an understanding whose wide-reaching implications are still being worked out in the services we offer to students and faculty.

At the Newman Library, IC standards have not only filtered out into the way librarians provide formalized instruction in the classroom, they have also begun to affect the way that our staff provides reference assistance. Although the reference desk at the Newman Library has long been a place where students received instruction, many of our staff members began spending more time thinking critically about the way that that instruction was delivered at the desk.

With this gradual evolution of reference, we (the authors) have come to a realization that perhaps the IC standards used to redesign the library's instruction could also help reshape reference services. Since the library's digital reference services are in such an early, formative stage, these services might be more open to experimentation. Before considering what that might look like, it is worth noting how librarians at Baruch used the ARCL IC standards to revise the way they work in the classroom.

Digital Reference and Information Competency

The Curriculum Committee of the Newman Library was asked in the summer of 2000 to design a course of instruction to be provided to about seventy sections of a required freshman composition course in the fall. To design a curriculum for this project, which we called the Freshman Research Experience, librarians reviewed the ACRL IC standards and identified which of the learning outcomes it could teach to in the two library workshops that each section would attend. After whittling down the IC standards to what we believed we could accomplish, we designed a curriculum that each librarian would follow when teaching different sections of the course.

Although the library did not formally assess our impact on the students who we taught through this initiative, we received anecdotal comments from English faculty about the improved quality of student research papers. It is clear, though, that by going through the process of examining the ACRL standards, talking about them, and selecting those that we believed were important, we not only improved the quality of our instruction but we also raised the bar for all of our instructional efforts.

This same process might also prove beneficial to libraries that are experimenting with digital reference projects. Although the level of interaction between user and librarian might seem limited in e-mail and chat, there are real possibilities for instruction. There are also some interesting benefits to providing instruction in this mode. For example, the user can request assistance at the point of need (instead of having to wait until they come into the library) and can thus keep the momentum going in their quest for information. Since e-mail and chat reference are both text based, at the end of a reference interaction, the user is left with a written record of the assistance offered that they can refer back to as needed.

To provide instruction via e-mail and especially via chat, though, librarians will need to work creatively to get their point across in a mode of communication that can be frantic and sometimes a little chaotic. The heightened pace of chat communication only exacerbates the problem librarians encounter of getting the student to slow down and think more carefully and thoughtfully about their search. It is easy enough to teach the user to perform an online search generating dozens of hits, but it is a real challenge to get students to take the time to critically and deliberately assess their search results (i.e., to read what is on their screen). Academic librarians must get users to reflect (as opposed to react) amid the vast chaos of the Internet.

By reviewing the ACRL standards in information competency, librarians will have an overarching framework to understand what it is that students need to know about finding and using information; from this understanding, librarians can then decide what level of instruction they can accomplish in digital reference interactions and can plan their services accordingly.

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67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	**058-98-E**
Division Number:	**V**
Professional Group:	Reference Work
Joint Meeting with:	-
Meeting Number:	98
Simultaneous Interpretation:	-

Collaborative E-Reference: A Research Agenda

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Introduction

Throughout the history of our profession, information-related activities have been often seen as diametrically opposing forces. Such have been pulling relationships between technical processing and public services, between library catalogs, periodical indexes, and finding aids, books and non-books, printed and born-digital carriers, between "fixed" objects and others that are dynamic, between librarianship and education, between libraries, archives, museums, and other information agencies. Recently, the notion of digital libraries has introduced a new competitor, computer scientists and engineers (see, for instance, *Communications of the ACM* May issue 2001), and threatened to displace or alter some of the professional library skills. Examples include skills in question negotiation, analytical bibliography, knowledge of gaps, crossovers, and resources, expertise in collection development, discipline-specific seeking behaviors, scholarly communication, and many other types of skills and expertise that I will be discussing at the IFLA Conference. While it is difficult to gain and maintain expertise in multiple tracks in parallel, joint workshops would help convene people together to discuss how we can as a group of professionals achieve the common goal: to organize collective knowledge and human memory for exploration and discovery.

Today, we need again to take a fresh and holistic look at what we are trying to do, to examine the nature of all types of resources that we acquire, describe, organize, arrange, preserve, access, select, and use. We need to understand characteristics of users, their abilities, inquiries, and information tasks, retrieval models, and operational standards. Finally, we need to educate current and future professionals about the evolving nature of virtual public service components.

We all read papers on important issues of digital libraries, on declining uses of *cumbersome* traditional reference services, on sharply increased uses of *convenient* search engines, on early experiences of collaborative digital reference services, and on uses of various chat technologies (e.g., Apple VideoPhone Kit, CU-SeeMee, LivePerson, E-gain, MOO). (e.g., Morgan)

In contrast, I will outline several research areas that need to be investigated if we are to close the gap between seemingly inconvenient "reference desk" access to answers and those that are obtained relatively easy over the Internet. The selected areas are based on studies from diverse body of literature as well as from my own research, experience and affinity.

Keywords:

Knowledge maps, Models of E-reference, Neutral question answering, Representation of realities, Research in E-reference, Search vocabularies, Skills of reference librarians,

Task allocation, User studies

Research agenda: Unanswered questions

In the time that I have here, three inter-related areas will be introduced, each about 5 minutes in length, and each will be viewed at the intersection between traditionally different sides on the information plane. Each intersection is a moment of truth between users' behaviors and the following areas:

- **How finely do we need to represent the reality** (the IFLA *FRBR Study* and our call for a "Bibliographic Genome Project")?
- **How well do we communicate the reality** (interoperability between and among (controlled->search) vocabularies)?
- **How well do we divide labor between human reference experts and mass collaborative Internet-based programs**? Identifying those reference tasks that humans can consistently outperform machine intelligence can help us design optimal interfaces between people and machines in collaborative digital real-time reference services.

1. The FRBR (IFLA) entity relationship model for works, expressions, manifestations, and items ought to be examined with an eye of a reference provider and from the point of view of the consumer. Consumers will be increasingly remote rather than in-house, diverse in their capabilities and needs, and will have high expectations from 24/7 real-time virtual reference (similar to the ones in banking, automated gas stations, food services, and other self-help industries). For different populations of customers, can we start thinking of what would be optimal (good enough) display elements and relationships between the different entity groups? (Bibliographic Genome proposed by Ercegovac, 2001a; also see this author's keynote paper at http://www.cs.ucla.edu/Leap/zer/maribor.htm). This area has been mainly studied by the cataloging community and at a generic level only. In addition, we need better linkages between different types of resources. For example, at one level, there is the 856 field, electronic location and access, between a MARC catalogue record and networked documents. It links a bibliographic record that is displayed on WebOpacs with full text documents. Other issues will be related to attaching tags for quality assurance, especially to fluid digital-born documents. Examples include authenticity, provenance, permanency,

methodological integrity--reliability and validity. Other variables relate to the concept of genre in digital libraries (Beghtol; Kwasnik et al.; Toms), to education (Sutton), access (Lawrence and Giles), and the host of legal issues such as intellectual property, security, and use.

2. Another area that will be equally important to consider is the capability to use seamless languages both by the reference provider and the consumer in various question negotiations and answering settings. The word seamless here means that clients need a series of gentle transformation of search languages on the Web, ranging from a pictorial representation of a "thing" for the elementary school child, to conceptual maps and DDC for the high school student. These would be linked to LCC for general population, and to domain specific thesauri and codes (e.g., UMLS, IEEE, AAT, ULAN, TGN, SIC). (Ercegovac, 2001b). More than ever before, we need a search language that would ensure consistency, accuracy, precision, and negotiation power between the remote parties. Controlled languages typically include subject headings, classifications, names (personal, corporate, genres, geographic), and unified titles. This area has been traditionally studied by catalogers and classification researchers; it has recently been studied by others and renamed into knowledge organization tools, ontologies, and meta languages. Research is needed to investigate level of compatibility between and among languages for different user groups. Here, we have not touched upon communication languages that are needed for disadvantaged users if we are to provide equitable CDRS for all potential clients.

3. An estimated only 6 percent of the total number of Web documents contains scientific or educational content; some 83 percent contains commercial pages. Search engines are likely to index more popular (number of pages that link to a given page) and US sites (Lawrence and Giles). With billions of digital documents out there, even with embedded tiny networked sensors and actuators ('smart dust'), it will be mandatory to delineate reference tasks to be performed by trained and experienced people and others to be computer mediated at different levels of intervention. We need to address questions such as: (a) How to capture subtleties of the face-to-face neutral question negotiation (Abels; Dervin and Dewdney)? (b) How to design "dissolving" customized interfaces (van Dam)? (c) Which instructional / explanation modalities are optimal for which users at the point-of-need? (d) How to provide "high-touch" in evolving "high-tech" worlds? A model for different levels of human/computer interventions will be discussed at the Conference.

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The Public Library's Role in the Danish Information Society: demand for new competencies?

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Abstract:

The new Danish act regarding library service has initiated several projects in order to promote the libraries and experience the library staffs in using the internet to communicate with the end users.Most public Danish information is according to the national information policy to be found on the official web sites and there is a tendency to publish online versions in stead of printed.This is a challenge to the reference librarians. In March this year the Interest Group on Reference Work arranged a conference on the future for the reference work when virtual tools take over. In Denmark we expect that the public library will continue to be a local centre for culture and knowledge where people also get together. But there is no doubt that the virtual library will be a matter especially for reference work.

According to the new library act[1] the virtual library is THE new item especially for the public libraries, where the use of information technology until recently was not so well established.
So the government has initiated several projects in order to promote the public libraries as local information centres, and to experience the library staffs in using the internet to communicate with the end users.

In October 2000 a new national service to the public was opened: *bibliotek.dk* - financed by the government. It is an online catalogue where you can search amongst all the Danish libraries' - public libraries as well as research libraries - books, CDs, articles, CD-ROMs, videos, reviews, talking books and research reports. You can order what you want and collect it at the library of your preference. All you need is an internet access and a borrower's number to the library where you want to collect. You can order what you wish from your home PC or from any internet access. If your own library has not got what you need, your library can get it from another library in the interlending network. This database is based on the national professional online catalogue DanBib, which still serves as the national bibliographic interlending tool.

Still the work on *bibliotek.dk* is in progress. The principal goal is to simplify the complexity of a professional database for the benefit of the non-professional user. For example a title should only be shown once though the libraries may have different principles of registration. The public libraries use the national classifications system (DK5) where the research libraries use Dewy. Also *bibliotek.dk* should only show material, that can be lend. According to the plans *bibliotek.dk* will continue to improve. Search facilities will be extended, and the interface to the end user will go on being developed. A future intention is that it will be possible to be told immediately if there is any waiting time. You also should be able to have the material sent to you if you pay for it, and if you want to buy a book, the site will link to online and local book shops. However bibliotek.dk is not only at database, where you can order from - it is also a portal to other internet services and web sites developed by the Danish libraries:

You can put your questions to *biblioteksvagten.dk* at any time of day or night, and you will receive an answer within 24 hours. Biblioteksvagten (=ask a librarian) is a network between 18 libraries (for the moment), and 49 librarians all over the country are engaged in the service. Biblioteksvagten's librarians can help with literature references or sources on the internet. And you can chat with a librarian during the opening hours.

The web address *fng.dk* is a guide to the prime web sites on the internet. The sites are chosen by a group of 90 librarians from different public libraries and there is access to 3500 web sites, covering subjects like sport, diseases, all the countries in the world, new jobs etc. Via e-mail you can get information about the latest links.
Also the children's library is on the internet: *dotbot.dk* is a net guide for children and young adults. The guide gives access to links on the internet which have been chosen according to the same guidelines as those the librarians normally apply when selecting material for children and young adults. It includes the database "Kloge Åge" (=Wise Åge), music reviews for - and by children and a net guide for the very young.

Global information for ethnic minorities is offered at: *finfo.dk* It is a global guide with links to the countries particularly relevant to ethnic minorities in Denmark. You can also get general information about the rights, obligations and possibilities of ethnic minorities in the Danish society.

In autumn 2001 a music site for the public libraries is planned to open: *musikbibliotek.dk*

Denmark's Electronic Research Library - DEF - is found at the adress: *deff.dk* This project offers a virtual library for researchers, students, lecturers and other users of Danish research institutions. It is still under construction but among the functioning parts of the project are: *bizigate.dk* a portal for marketing, economics and statistics, and "The Virtual Music Library" (*def-musikportal.dk*) a portal to music resources such as contemporary Danish music and Danish artists and composers.

In addition most public Danish information according to the national information policy is to be found on the official web sites and there is a tendency to publish online versions in stead of printed. Regarding reference material the DEF-project has initiated projects for research libraries and for public libraries to get licenses to databases and reference material with relevance for the local users. This of course is a challenge to the reference librarians and time has come to consider whether we can quit the past and the good old reference sources. Or does the public library still have a role not only on the internet but also as a physical place with a personal contact and at least some books to be seen on the shelves? In March this year the Interest Group on Reference Work arranged a conference on this subject. More than 60 reference librarians and librarians from public libraries all over the country took part in the discussion.

The conclusions from the conference point in the virtual direction - especially when the topic is reference and information management, but we also have to consider that we still have users, who are not familiar with IT, and that some of our services still will be better delivered in a personal encounter at the library. However there is no doubt that time has come to improve the librarians' competencies in being "virtual librarians". Skills in handling desk top facilities, downloading and file handling is still not "common knowledge" among the middle aged librarians (and we are a lot of middle aged Danish librarians!).

Also it is obvious, that the public libraries have competitors in delivering information via the internet, and that people often help themselves searching and finding via the most popular search engines. For the users it must make a difference to ask a librarian: you must get correct and sufficient information on time. The Danish libraries have skilled workers and competence to deliver information even to specific groups of users - but this is often a secret to the public!
An explanation in many libraries will be that we have not got the time, the experience and other resources for marketing our services.

The public library is well established in peoples' minds and our statistics show that we are busy and that the number of users is increasing - especially when it comes to the education area.
So it is easy to forget, that there actually is a much bigger market for information in the local area among professionals as well as amateurs: businesspeople, lawyers, doctors, people looking for jobs, genealogists and people dealing with local history.

Through the years the libraries have built up competencies and resources to serve the local areas with proper information; in a near future these investments will be changed into virtual services delivered from as well small as big public libraries - the only tool you need is access to the internet. According to our first experiences with *bibliotek.dk* and *biblioteksvagten.dk* this will attract new categories of users, and in addition to the traditional interview at the reference desk the librarian also must develop skills in being "the librarian on the internet". In Denmark we still imagine that the public library will continue to be a local centre for culture and knowledge where people also get together. But there is no doubt that the virtual library will be a matter especially for the reference work.The tendency to spread out the reference work in the organisation in many small libraries should maybe be reconsidered and so should the whole organisation of the library according to the papers from this conference published in Danish in "Bibliotekspressen"[2] and "Referencen"[3]

In many aspects the reference work in the Danish libraries must go back to basics if the library service shall make the difference for the user. And marketing (direct and general) must be priority. It is necessary that the service offered is accessible: there must be someone there to answer the phone and chat. For many years we have kept on taking up new tasks - now is the time to look back and find out if services are no longer needed. It is obvious that we cannot go on compiling new activities and services - we simply have not got the resources for that. We have noticed, that the users' needs are changing. Many users still come to the library for leisure, but the number of students and people searching for lifelong learning is growing and their demands are becoming more sophisticated. We can expect that our quick reference service will change into information management and document delivering and that the librarian will have to deal with more complicated subjects on an expert basis. We also expect that our users want access to the library virtually as well as physically 24 hours round the clock. From the statistics on the use of *bibliotek.dk* we can see that most people order their books around midnight, when it is cheap to use the internet. This access to the library is of course also a question about resources - and for the moment the online library service on *biblioteksvagten.dk* runs from 10 a.m. to 22 p.m.

Another conclusion from the conference is that in addition to the portals mentioned above we also need to develop a virtual reference desk if possible on a local basis. Having the reference sources online makes them invisible - especially to the users frequenting the physical library.
We need experiences in presenting the online reference tools to the end user. Hopefully this will be an essential topic in the teaching on the Royal School of Librarianship - but still we also need re-education for the staff already active in the libraries.

As a result of our conference the Interest Group on Reference Work plans to initiate projects in marketing the libraries' reference service to the Danish users and in creating the virtual reference desk. The aim is not to make a national reference desk - why compete with already existing portals.
We want to keep up the good Danish traditions of serving the local areas with services relevant for them: services for the elderly, ethnic minorities, local business people, the farmers, fishermen, local historians and genealogists or whoever and whatever influences on the local area. Therefore the Interest Group on reference Work finds it important to create standards, which can be worked out to more special services offered to the local users. This also could be of help for librarians who are not so skilled in using computer technology and making homepages!

Notes:

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[1] An English version of The Act Regarding Library Service can be found on The Danish National Library Authority's homepage at: http://www.bs.dk/index.ihtml

[2] Lisbet Elkær: Profilering og markedsføring af referenceområdet.
Bibliotekspressen 2001:8 p. 216-218

[3] Vera Daugaard: BiblioteksVagten - og samarbejdet om dette tilbud
Referencen 2001:2

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BIBLIOTEK.DK	www.bibliotek.dk
BIBLIOTEKSVAGTEN	www.biblioteksvagten.dk
FNG	www. fng.dk

DODBOT	www. dodbot.dk
FINFO	www.finfo.dk
DEFF	www.deff.dk
BIZIGATE	www.bizigate.dk
THE VIRTUAL MUSIC LIBRARY	www.def-musikportal.dk
MUSIKBIBLIOTEK.DK	www.musikbibliotek.dk (opens autumn 2001)

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Knowledge Management, User Education, and Librarianship

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Abstract:
The role for librarians in Knowledge Management in terms of designing information systems, creating classification systems and taxonomies, and implementing and operating those systems is obvious. Not so obvious is a key role for librarians in user education and training. A recent study (KPMG Consulting, 2000) by KPMG of KM systems implementations reveals an alarmingly high failure and disappointment rate, with more than half of the failures attributable to inadequate user training and education (though remarkably this goes essentially unremarked upon). Librarians are skilled in user education and training- we have traditionally called it "bibliographic instruction". The need and the match is obvious.

This article develops that theme, and draws upon two other key information phenomenon:

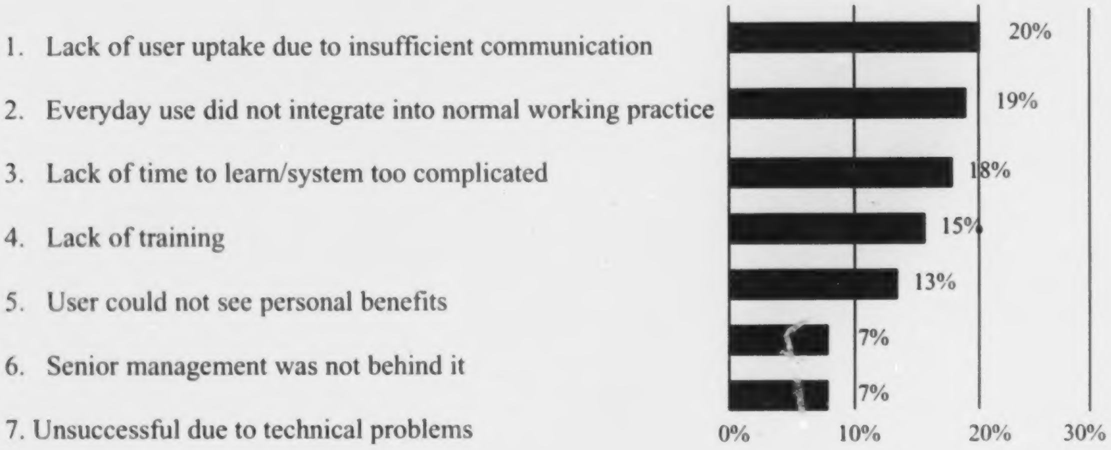
1. *the importance of rich communications, browsing, and serendipity and*
2. *the phenomenon that information workers, from researchers to managers, tend to spend a surprisingly consistent 20%-25% of their work time in information seeking*

and draws conclusions from them about the potential role for librarians in user education and training in the context of KM initiatives.

Knowledge Management, KM, is a topic that continues to burgeon in importance.* much of the overlap between KM and librarianship and the consequent opportunities for librarians are obvious-particularly the design of databases and systems, and the creation of classification schemes and taxonomies. There is a very important area of opportunity that is not so obvious however. That area is, if KM implementations are to be successful, the need for effective user support and user education and training. This lack of attention to user education and training is somewhat surprising. After all, it is now common to observe that although the phenomenon of management attention upon KM, Knowledge Management, was given birth to a large degree by the appearance of the internet and its brethren, intranets and extranets, fundamentally KM is more about people and corporate culture than it is about technology. And surely user education and training should be an important component of that emphasis upon people and corporate culture.

Both the importance of user education and training and the fact that that importance is not adequately realized is revealed in fascinating fashion by a recent study (KPMG Consulting, 2000) conducted by KPMG, a major international consulting firm. KPMG studied more than 400 firms as to their status in implementing KM systems. They reported that of the 288 firms that had KM in systems in place or were setting up such a system, there were 137 cases, where the benefits failed to meet expectations (and of that base of 288 firms, 127 were still only in the setting up phase). The breakdown of why benefits failed to meet expectations is as follows:

Why benefits failed to meet expectations
Why do you think the benefits failed to materialize?



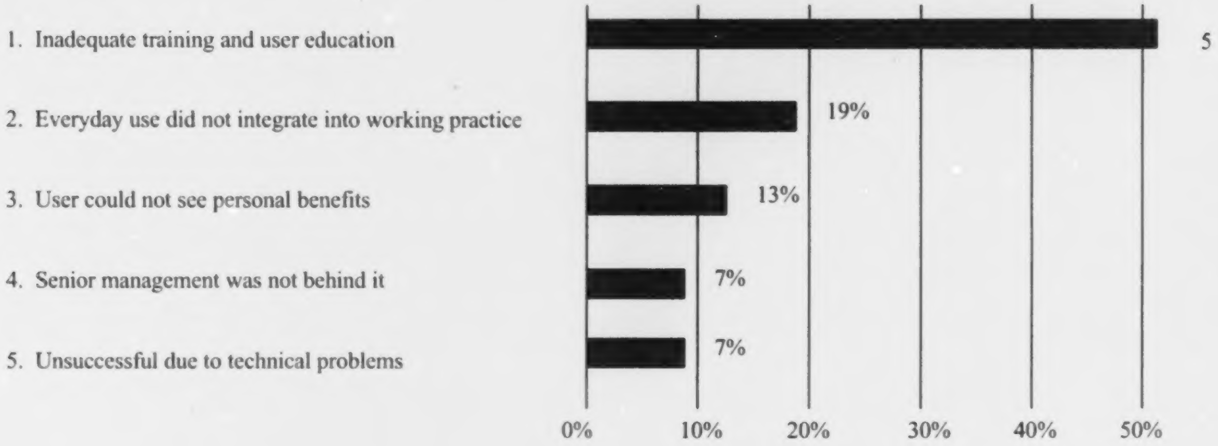
Base: all where benefits fail to meet expectations (137)

* Note these percentages add to 99% due to rounding error; there is no overlap.

*Indeed, the American Society for Information Science and Technology has earlier this year published in book form a bibliography of the Knowledge Management literature of almost 200 pages (Burden, 2000)

What is striking however, and striking on two levels, is that three reasons: #1) lack of user uptake due to insufficient communication, #3) lack of time to learn/ system too complicated, and #4) Jack of training, are all fundamentally the same reason -inadequate training and user education. With that recognized, the table can be recast in a much more informative fashion:

Why benefits failed to meet expectations
Why do you think the benefits failed to materialize?



Base: all where benefits fail to meet expectations (137)

Striking first, is that inadequate training and user education is by far the most prominent reason for why benefits failed to meet expectations, accounting for the majority of failures, exceeding all other reasons combined.

One small caveat is that as Davenport & Prusak (2000, p. 26) observe, sometimes lack of training may take the blame when the real culprit is a combination of naive expectation and a failure to adequately address the corporate cultural changes needed. Even with this factored in however, the predominance of the training and user education factor is striking. Offsetting, this caveat however is the observation that it is also quite likely that some component of reason 5, "Users could not see personal benefits", is also reflective of inadequate training and user education.

Striking second, is that the KPMG report fundamentally fails to pick up on this rather dramatic finding. To their credit, KPMG does observe that "These responses confirm the fundamental flaw in viewing KM as a technology issue: it is not the technology that is holding organizations back but a lack of strategy and a failure to build KM in the organization's day-to-day operations and its culture in order to encourage end-user buy-in.", but that is as far as they get toward a recognition of what their data really portrays.

An interesting comparison is that in KPMG's data, the percent that reports that inadequate training & user education was the principal problem for failure was 53% while the percent that reports that "senior management was not behind it" was the principal problem for failure was 7%.

It is of course not the case that senior management support is not important, but consider and contrast the proportion of the KM literature that emphasizes the key importance of getting senior management support with the proportion of the KM literature that emphasizes the key importance of setting up adequate and extensive support for user education and training, and one immediately gets a feel for the extent of the achilles heel problem. The culture of KM is clearly nowhere near adequately aware of the importance of training and user education, and the KPMG report illustrates and illuminates the problem in a wonderfully compelling fashion by ironically enough, only barely recognizing it.

Librarians as the Trainers of the Users

The immediate fit that should leap to our consciousness is that there is an obvious match here- there is a major problem with KM implementation, inadequate training and user education, and librarians have long been skilled in providing training and user education. We call that "bibliographic instruction". A major need for and a role for librarians in KM seems obvious.

So we can conclude that librarianship has a major contribution to make to Knowledge Management in the area of user education and training. Where do we go form there? What can we conclude more specifically?

Finally, remember and point out to others in your organization, that libraries have been concerned with and designing for the useablity of online information systems, OPAC's for example, longer than almost anyone else.

In addition to "design the training and education program first", what specific lessons are there?

What can we conclude?

There are a number if things that we can conclude, but before we get to that point, there are two important background issues that we need to review.

These two issues are:

1) The importance of rich communications, browsing, and serendipity.
2) The phenomenon that information workers, from researchers to managers tend to spend a surprisingly consistent 20% to 25% of their work time in information seeking.

1) Rich Communications, Browsing, and Serendipity

There is an extensive body of work documenting the relationships between knowledge worker productivity and organizational productivity, and rich communications, browsing, and serendipity.

The seminal work in this field is that by T.J. Allen (1977) who compared the winners with the losers in competing military research and development contracts, and examined their information environments. He found that the more productive teams were particularly characterized by having had more diverse information contacts outside the project team that did the less productive teams.

A particularly revealing work in that genre is a study conducted in the contest of the pharmaceutical industry, (Koenig, 1992) examining the information environment of the highly productive companies in contrast to the not so productive companies. The measure of productivity used was the number of approved new drugs per research dollar expended, refined further by weighting the measure in regard to: I) whether the FDA, the Food and Drug Administration, regarded the drug as an important therapeutic advance, or as simply a useful addition to the medical armamentarium, 2) the chemical novelty of the drug, and 3) the filing company's patent position with regard to the drug, an indication of where the bulk of the research was done. Research productivity, thus measured, differs among large pharmaceutical companies by more than an order of magnitude. The central finding of the study was that the more productive and more successful companies were characterized by a very much richer and more open information and communications environment.

What is perhaps the most striking result of the study however is that the single best predictor of research productivity and success was the extent to which employees disagreed with the statement that "my company puts more emphasis on the confidentiality of proprietary data than is typical for the industry". In other words, the greater the emphasis upon protecting the company's proprietary date, the less successful the company was in terms of creating new pharmaceutical products and getting new products into the pipeline.

In another rigorous study Orpen (1985) examined productivity in R&D intensive electronics/instrumentation organizations. He analyzed various aspects of the behavior of research managers as perceived by the research staff, and found that in the more productive organizations (as defined by rates of growth and return on assets) the managers were perceived to be significantly more characterized by three aspects of their behavior, all information related: I) they routed literature and references to scientific and technical staff; 2) they directed their staff to use scientific and technical information (STI) and to purchase STI services; and 3) they encouraged publication of results and supported professional meeting attendance and continuing education. Particularly striking was the finding that not only did information related management behavior tend strongly to discriminate between "high-performance" and "low-performance" companies, but that non information related management behavior did not have any apparent discriminatory value.

In reviewing the corpus of work on R&D innovation, Goldhar et al (1976) conclude that there are six characteristics of environments that are conducive to technological innovations. Again, the first three are all related to the information environment -specifically. 1) easy access to information by individuals; 2) free flow of information both into and out of the organization; 3) rewards for sharing, seeking and using "new" externally developed information sources. Characteristic number six is also information environment related, the encouragement of mobility and interpersonal contacts.

What is intriguing in these studies of the correlates of successful R&D is not only the consistency of the findings, but the phenomenon that when various factors are considered, the information related factors so consistently jump to the head of the list. Equally intriguing is the frequency with which the authors of the studies fail to remark on this phenomenon.

Also consistent within the studies is the importance of browsing and serendipity. In Koenig's study of the pharmaceutical industry for example, the researchers at the more productive pharmaceutical companies not only used their corporate library or information center more frequently, they used it proportionately much more for browsing and keeping abreast, as opposed to using it to address a specific information need. Indeed at the pharmaceutical company most highly rated for research success, Pfizer, the corporate message encouraging such browsing was abundantly clear. Immediately on entering the library at research headquarters one saw two long tables, one prominently labeled "Today's Journals" and the other prominently labeled "Yesterdays Journals". The researcher was obviously expected to be in the library, to be there frequently, and to be following the most current literature. By contrast, another large company, one very near the bottom of the list, Searle, made it very clear that the researchers should be at the laboratory bench doing their job, and when information was needed, they should ask for it to be delivered.

In a similar vein, Mondschein (1990) studied the productivity of researchers in major corporations in several industries, including pharmaceuticals and electronics. He found that scientists who used literature alerting services heavily were more productive (as measured by publication output, patents, and internal evaluations) than their colleagues who either did not use such services or used them only infrequently. Further, the productive researchers were characterized by their use of a wider variety of information sources, particularly by the extent of their efforts to stay current and by their use of patent information sources.

The literature received above is not exhaustive, but it is typical, and a thorough review of the literature (Koenig, 1990) reveals that it is remarkably uniform and consistent in its finding that there is a clear relationship between an organization's information environment and its productivity, and that richness, openness, and serendipity are the salient factors.

2) The 20-25% Rule, "Satisficing"

A very intriguing finding from studies of the work practices of white-collar professional employees is that they spent a rather consistent 20-25% of their time information seeking (Griffiths, 1982; King, McDonald, & Roderer, 1981 ; Nelke, 1999; Poppel, 1982; Roderer, King, & Brouard, 1983). This proportion is surprisingly independent of the apparent information intensity of the job domain. Line business managers and administrators spend as much of their time information seeking as do research scientists. There seems to be a sort of homeostasis, or perhaps more accurately a satisficing mechanism at work. Knowledge workers whether managers or administrators or researchers need substantial information input to perform satisfactorily, but when the amount of time devoted to that function approaches roughly 20%, then knowledge workers appear to begin to satisfice, they begin to conclude that they have to get on with the rest of their job, and that if they have not already done so, they will soon run into diminishing returns in their information seeking, and that it is time to proceed based on what they have.

The obvious conclusion is that if knowledge workers are going to spend so much of their time information seeking, then they are likely to perform better if the systems and the environment is provided so that their time is spent efficiently. It is unlikely after all that that 20-25% figure arises because most knowledge workers coincidentally arrive at just the information they need at just that same point. It is rather more likely that they share an intuitive satisficing mechanism in common, and that they often proceed in their decision making with rather poorer information then they would have if a more supportive environment and more capable information and knowledge systems were in place.

User Education and Training in the Different KM Domains

The two points above immediately imply that here are at least two different domains for training and user education. The 20-25% satisficing point phenomenon implies the strategy of assisting information workers to apply that 20-25% of their time as efficiently as possible and creating an environment that makes it easy for them to do so, even impels them to do so. It thereby also implies a domain of directed searching. On the other hand, there is the undoubted utility of serendipity, and broad spectrum browsing, and serendipity is by contrast inherently somewhat messy and seemingly inefficient. This is clearly a second and different domain.

If this distinction is combined with the codification (creating structured information and knowledge sources) versus personalization (facilitating interpersonal contact and access to tacit knowledge) distinction popularized by Hansen, Nohria, and Tierney (1999), then we arrive at the tableau below:

	/CODIFICATION	**/ PERSONALIZATION**
DIRECTED INFORMATION & KNOWLEDGE SEARCH	Databases, external & internal Content Architecture Information Service Support (training required) data mining best practices / lessons learned	community & learning directories, findings & facilitating tools, groupware
SERENDIPITY & BROWSING	Cultural support (the Pfizer example) current awareness profiles and databases selection of items for alerting purposes / push data mining best practices	Cultural support spaces - libraries & lounges (literal & virtual), cultural support, groupware travel & meeting attendance

(note the dashed lines are intended to indicate that the boundaries are porous and overlapping)

The utility of this tableau is that is serves as a chart for the different domains that need to be addressed for user education, and allows us to think more crisply about what is needed in training and user education.

Intriguingly, the tableau above turns out to be fundamentally identical to the tableau utilized for the last several years by IBM to explain and articulate KM, its functions and its components. The IBM Tableau is below:

KNOWLEDGE MANAGEMENT STRATEGIES

	COLLECT / (Stuff)	**CONNECT** / (People)
EXPLOIT	HARVEST example: best practices	HARNESS example: response teams
EXPLORE	HUNTING example: data mining	HYPOTHESIZE examples: brainstorming scenario analysis

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The two tableaus are so consistent in fact that they can quite usefully be combined, superimposed, with no major distortions:

DOMAINS OF KNOWLEDGE MANAGEMENT STRATEGY, AND OF TRAINING & USER EDUCATION FOR KM

	COLLECTING (STUFF) & / CODIFICATION	**CONNECTING (PEOPLE) & / PERSONALIZATION**
	Databases, external & internal	
DIRECTED INFORMATION & KNOWLEDGE SEARCH	Content Architecture Information Service Support (training required)	community & learning directories, findings & facilitating tools, groupware
EXPLOIT	data mining best practices / lessons learned	response teams
	(HARVEST)	(HARNESS)

SERENDIPITY **&** **BROWSING** **EXPLORE**	Cultural support (the Pfizer example) current awareness profiles and databases selection of items for alerting purposes / push data mining best practices (HUNTING)	Cultural support spaces - libraries & lounges (literal & virtual), cultural support, groupware travel & meeting attendance brainstorming scenario analysis (HYPOTHESIZE)

(note the dashed lines are intended to indicate that the boundaries are porous and overlapping)

Scanning the tableau above reinforces the observation that KM is a multi-faceted undertaking and it also makes the point that user education and training is multi-faceted.

Target the Domains

Working from the tableau of domains, we can finally arrive at some at some conclusions and recommendations for the role of the librarian in user education and training in the context of KM.

Harvesting:

- Teach database searching

  Using and searching databases, external or internal, is not intuitively easy. There is an immense literature on database searching attesting to this inconvenient fact. In the welter of publicity in the last several years about the Internet, it is easy to overlook the fact that online database searching goes back three decades, and that while the quantity of material online has mushroomed, the quality of the tools and techniques has changed very little in more than a quarter century. Teaching users how to use database systems effectively is just as mandatory now as it was in 1971 when the world of online databases blossomed (Koenig, 1992 B).

- Teach database mining
  The use of tools for database mining and manipulation is an area that is particularly non-intuitive. The average user does not intuitively think in terms of relational databases. Effective data base mining simply won't happen without training.

Hunting:

- Train users on the use of current awareness services.
  Just like doing an online search, setting up a good profile for a current awareness service, despite what vendors will say, is not easy or intuitive. It requires skill and experience to design a good profile.

Secondly, over time, people's interests and responsibilities tend to diverge from their profile. Profiles need to be updated and maintained, and the best way to accomplish this is to set up a procedure whereby an information professional (as distinct from an IT professional) periodically makes an appointment with key employees to lead them through an information requirement determinations interview and update their profile. Otherwise, if users are left to their own devices, profiles seldom are updated since there is no triggering event as the profiles gradually become less relevant. In addition, the revisions will be more effective if an experienced database searcher takes part.

Harness & Hypothesize

- **Teach the use of groupware**

Even systems that are designed to be easy to use aren't as easy as they are made out to be, and people are very reluctant to admit their lack of knowledge. Whether the software in question consists of search engines, or word processing, or statistical packages, or groupware, there is a consistent set of findings that most users learn only the very basic functionalities and their skills plateau there. With a bit of education, including refresher training, users can make much more effective use of their tools.

What other Lessons are there?

- **Think in Terms of Coaching**

In so far as practicable, user education and training for busy professional should be personnel and one-on-one. That is, one should think of and design user education and training as coaching. The most successful KM implementations, a classic example being BP's virtual teamwork program (Davenport & Prusak, 2000, p.20 & 21) have been successful precisely because they designed and thought of their user education and training program as coaching.

- **Design the Training and Education Program First**

Another conclusion comes straight out of classic systems design and implementation lore. A well worn but very valuable precept in systems analysis is "Write the User Manual First". The point is that taking the time to write the user manual first, or at least very early on in systems development, forces the design team to put themselves in the user's shoes and to think very clearly about what the system will and will not do. It helps avoid the common problem of the systems development drifting off in the direction of the easily doable, or what the programmer thinks is clever or neat, rather than the often more prosaic direction of what the user really needs. And, of course, it helps ensure that the system does what is needed in a fashion that is effective, easy to use, and relatively easy to train users to use.

The KM analog of this is "design the training and education program first" or at least as early on as is practicable. There are two sets of reasons why. The first set is precisely those given above, after all, implementing KM is a systems development project. It is however a systems development project in which the cultural aspects are of even more critical importance than in most projects. The second set of reasons derives from the importance of those cultural aspects.

If one thinks about a program for user education and training, one has not only to think about how one uses the system, one has to be prepared to answer the questions, why? In asking, and answering, the question -why? The team is forced to address what the system is trying to accomplish, whether it is likely to be accomplished, and what stands in the way, typically cultural issues, and then the question arises, what is being done and what can be done to address those issues?

- Sea Stories and Change Agentry - the Why.

An extremely important point, one that deserves a major article in its own right is that user education is not just about the how to; it is also about the why. User education must also impart the why, why are KM systems being put in place and how will both the user and the organization benefit. The educator/trainer is therefore also a change agent. The most effective tool of the change agent/trainer is the "sea story", the story of the positive experience of others in using the systems. Don't just talk about the hypothetical advantages, give concrete examples; tell sea stories.

In summary:

Inadequate user training and education is by far the most prevalent reason for failure in KM, and it is an easily preventable reason.

The key lessons are:

- Design the training and user education program first. The first order effect of this strategy is that it directly addresses the principal reason for KM implementation failure, and the second order effect is that it focuses attention on the "why" of KM and upon the cultural changes that need to be accomplished.

- Train users for directed information & knowledge search (and give them good support). If users don't do this efficiently, they can squander their information search time up to the 20-25% satisficing point, and have inadequate time left for:

- Facilitate Serendipity and Browsing, for which the users need a supportive corporate culture, and more training and user education.

- Design the training and user education program first. The first order effect of this strategy is that it directly addresses the principal reason for KM implementation failure, and the second order effect is that it focuses attention on the "why" of KM and upon the cultural changes that need to be accomplished.

- Call it, and think of it, as "Coaching", not user training or education.
  Not only do users respond better, but it puts the "coaches" in the right frame of mind, emphasizing that the interaction is, or should be, more apt to be personal and one-on-one, rather than classroom training and education, interactive not passive.

- Don't just show how; tell why, tell sea stories.

With these guidelines in mind, librarians can not only make the point about the need for user education and training and their ability to make a contribution, they can begin to describe specifically what needs to be done and how they can help accomplish it.

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KNOWLEDGE MANAGEMENT AT THE FINNISH GOVERNMENT – NOW, NEVER OR LATER

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Abstract:

In the paper, knowledge management is seen as an element of strategic management for which the highest level of the organisation is responsible. Knowledge management is discussed in the framework of the current reform of the central government in Finland. The main goals of the reform are:to strengthen the cooperation in the central government: to develop the strategic planning and its tools and to develop the cooperation among ministries.

- *to analyse the role of the Ministries in guiding the administrative sector of the Ministry*
- *to improve the confidence of the citizens and civil servants towards the administration and to empower the citizens in public affairs.*

Knowledge management has explicitly been taken as a part of the reform.

At the end of the paper the intranet of the government as a tool for KM is discussed. The intranet creates a common information portal for user organizations: the Ministries, Chancellor of Justice, the Cabinet of the President and the Parliament. The aim of the intranet is to support the working processes and the culture of interaction, learning, and cooperation. It is planned to be based on user friendly technology and common standards. The features of the next version of the intranet are discussed.

Keywords: Knowledge Management, Central Government in Finland, Intranet

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1. Introduction

Knowledge management (KM) is widely discussed – it is discussed so much that many persons already have got tired, and some have started to wait for new trends to come. International consulting companies have sold us several management trends: management by objectives, performance management, process management, quality management, value based management, business intelligence, balanced scorecard, etc. Anyhow, I find it sad if we take knowledge management just as one of the trends that come and go, without assessing the positive capabilities of the concept.

Knowledge management can be seen as a method – as one of the methods – of improving the functionality of the organisations. Knowledge management, if taken seriously, may lead to rethinking the whole working process of the organisation. I understand knowledge management as an element of strategic management for which the highest level of the organisation is responsible. The organisation has to have a vision: what will it achieve, which are its goals. This vision should be expressed in a simple way and communicated to the whole organisation from the top to the bottom. The vision should be summed up in a strategy, which also has to be made known in the whole organisation. KM leans on the strategy and supports the realization of the strategy.

This also means that the specialist departments, as e.g. the libraries or the information services have to integrate in the organisation. I do not know whether this is common in all countries, but in Finland we have noticed that libraries and information services have a long tradition in networking among themselves, that is with other libraries and information services, but until recent years there have been deficiencies in networking or integrating inside their own organisation.

2. Values and Goals of Knowledge Management

I find the values of KM very essential. The values are: openness, knowledge sharing, confidence, working and learning together. The basic principles of KM can be described as follows[i]:

- Open communication culture that supports networking
- Decision making that is based on open interaction
- Leadership that empowers individuals
- Organizational culture that appreciates all forms of knowledge (explicit, tacit, potential).

The goals of KM can be described as follows:

1. To build such a knowledge management system that enables
    - open communication
    - effective information retrieval
    - document management and reuse of documents
    - networking of experts
    - diffusion of best practices
    - constant development of the system

2. To develop cooperation forms and decision making conventions that
    - are based on dialogue
    - support empowerment of the individuals
    - add comprehension of how one´s own work is associated with values, strategies and goals of the organisation
    - include constant evaluation of the results and methods of the work

3. To create methods and practices that
    - support interaction and networking with contact groups,
    - enable the recognition of weak signals
    - help to develop ideas into innovations.

4. To develop indicators with which it is possible to follow the development of knowledge assets and added value.

Developing KM challenges one to ask, why the organisation exists, what are the basic reasons for its existence. It also challenges to ask, whether the organisational structure corresponds with the goals and tasks of the organisation.

Processional approach instead of functional approach may offer a better basis for the planning, at least in organizations like the governments, where the processes go horizontally through several organisations: from an administrative sector to a ministry and further to the Government and to the Parliament.

In the following I will discuss what has been planned and put into effect at the Finnish Government concerning knowledge management. The advancement of knowledge management is intertwined with the reform of the central government.

3. The Reform of the Central Government in Finland

3.1. Present State of the Central Administration

Let me first briefly describe the present state of the central administration in Finland. The legislative power lies with the Parliament; the Parliament also decides on State finances. The executive power lies with the Government and the President of the Republic; the Ministers must enjoy the confidence of the Parliament.[ii]

The general administration of state affairs rests with the Government composed of the Prime Minister and seventeen ministers.

The Government is to be understood on the one hand as the general meeting of the Government, which is a decision-making body, and on the other hand in the broad term as comprising all the 12 Ministries and the Prime Minister's Office. The Prime Minister's Office can be seen as one of the Ministries, too. Each Ministry has an administrative sector, which consists of different kinds of offices and institutions, government departments and agencies, state-owned enterprises or companies and expert organisations. When I in the following speake of "government" I will refer to this broader concept: to Government, the Prime Minister's Office and the other 12 Ministries, without the ministerial administrative sectors.

The Ministries are very independent and they have their own management. Cooperation exists among Ministries, but the coordination is rather exigous. There is an information network for the government and some joint information systems. The Ministries have their own information systems as well, some of them together with their administrative sectors. Most of the Ministries also have separate intranets, and each of them has an internet web site. The government has both the intranet and the internet web site (http://www.vn.fi).

3. 2. Background for the Reform

We can see several strategies both on European Union level and on national Finnish level, which make us to rethink the procedures of the government. On EU level we have **eEurope**[iii] and **eContent**[iv] programmes, with their aim to develop information society in Europe. Especially eContent is interesting for us information service professionals, because one of its action lines aims at improving access to and expanding the use of public sector information.

Also at the national Finnish level the information society strategies force the government to rethink its own activities.

The reformed **Act on the Openness of Government Activities**[v], which came into force in December1999, can be seen as one symptom. The objectives of the Act are "to promote openness and good practice on information management in government, and to provide private individuals and corporations with an opportunity to monitor the exercise of public authority and the use of public resources, to freely form an opinion, to influence the exercise of public authority, and to protect their rights and interests." It is important to note that according to the general rule also the preparatory documents are public.

Law on electronic transactions in administration forces to rethink the processes of actions in government, too. By electronic transactions we tend to think the transactions between citizens and authorities, but it also can mean transactions between enterprises or communities and authorities or between authorities themselves. In the case of government, most of the transactions happen between authorities.

Further, the Government Resolution **Guidelines of the Policy of Governance: High-quality services, good governance and a responsible civic society,** from 1998, is an important strategic paper as a background for the reform.[vi]

The lack of cooperation among Ministries was one of the reasons why the Government decided to start to reform the central administration. Deficiencies in strategic thinking and management were noticed, too. Further, there are concerns of how to keep the best resources in the public service: how to attract, keep and develop the best human resources in the rank of the public service.

The reform of the central government was prepared by a study by an international group of "three wise men"[vii] who were assigned to analyse the central governments in EU Member and in some other relevant countries, and evaluate the Finnish central government in the light of this analysis. On the basis of this analysis the Government decided in June 2000 to appoint a project with a steering group with 6 ministers as members, and thirteen sub groups. The groups started their work in September, 2000.

3.3. Goals of the Reform

The main goals of the reform of central government are:

- to strengthen the cooperation in the central government: to develop the strategic planning and its tools and to develop the cooperation among ministries.
- to analyse the role of the Ministries in guiding the administrative sector of the Ministry
- to improve the confidence of the citizens and civil servants towards the administration and to empower the citizens in public affairs.

The project works between 1.7.2000- 31.12.2001. So, when writing this, the project has not yet made any proposals, and the Government has not made any decisions. That is why the title of this paper is cryptically "Knowledge Management at the Finnish Government – now, never or later".

3.4. Knowledge Management as a Part of the Reform

Knowledge management has explicitly been taken as a part of the reform. There are three sub-projects, which deal with KM:

- The development of the strategic and coordination tools of the Government, especially so-called Strategy Portfolio, in which the Government program takes shape as concrete projects. The Strategy Portfolio follows the realisation of the projects.
- Support in preparation of the Government program, especially concerning knowledge and information
- Evaluation of the governmental information systems

Intranet of the government, called Senator, is one of those governmental information systems, which were evaluated. The evaluation report has been completed in May 2001. When planning the Senator version 2, the project group has had in mind the goals of the reform of central government, and the ideas, which have been discussed around the reform. Even though we do not know the results of the reform we want to advance these ideas. The goals of the reform and values of KM are very parallel. It is encouraging that the evaluation report supports the ideas of the Senator version 2, too.

3.5. Reorganising the Information Management of the Government

As mentioned above, the Ministries are very independent, also so in their information management. There has been no effective coordinating body. Networking and cooperation among information management personnel in Ministries has been quite defective.

The need for better cooperation in the information management was recognized long time ago. Now it seems that something concrete is taken shape: there is a plan to establish a special unit for the information management of the government, which also covers the coordination of the governmental information services. The unit would be a part of the Ministry of Finance.

The Unit for Information Management (IM) would be responsible for the development of the common information management of the government, including information network, data security, technology of the common information system, etc. Other Ministries, mostly Prime Minister's Office, still may own the governmental information systems and processes behind them, but the responsibility for their technology would be at the Unit for IM. – Again I have to emphasize, that when writing this, no decisions have been made yet.

3.6. Building the cooperation

Other knowledge, learning and communication professionals have had even less cooperation than the information management professionals, whereas the information service personnel has succeeded better. The information services have an established network, called Valtipa, the coordination of which is at the Ministry of Finance. Valtipa has an own budget, which allows to carry on concrete projects. Valtipa has organized training for the information professionals, taken initiatives in creating common information systems and government intranet (the Senator), it has updated a common thesaurus for the government etc.

We only can guess, what is the secret of the information service professionals: why we have succeeded in networking and why this cooperation has concrete results. One explanation is the tradition of our profession: we always have networked. Another explanation for the success is the broad basis of the networking: the cooperation covers all levels and all professionals, not only the chiefs. All persons working at the information services participate in the networks.

Valtipa network also has built cooperation among other groups of knowledge professionals: we have organised a training course, the idea of which was to develop synergy among information service personnel, IM personnel and communication personnel. A result of this training has been an idea to organise a regular synergy forum: a series of open meetings where actual projects can be presented and common problems and interests can be discussed. It is important to remember, that the dialogue is a very crucial element in KM.

Information service personnell also has made progress in cooperation with education and training professionals of the Ministries, aiming at the development of a common virtual learning space for the government.

An important tool for cooperation and communication is the intranet of the government, the Senator. Now at the end of this paper I shall discuss more in detail the ideas we have had in mind when developing the Senator.

4. The Intranet as a Tool for KM of the Government

The idea of the intranet for the government evolved about seven years ago. The concept has been changed during the planning process, but in its present form it was introduced to the users at the beginning of 1998.

When planning the intranet the time was not yet ripe to plan it together with the separate intranets and internet web sites, or other information systems produced by the Ministries. However, the intranet tries to create a common information environment for the government and other user organizations. The intranet can be accessed in the thirteen Ministries, Chancellor of Justice, the Office of the President and the Parliament, that is, 6000 persons altogether. The intranet was built to satisfy the common information needs of the user organisations, but not the special needs of the ministries.

The intranets seem to date as soon as they have been introduced to the users. That is the case of Senator, too. As told, it was opened in 1998 and as soon as in 2000 the Prime Minister's Office set a project to plan a new version of the intranet. The project should conclude at the end of this year (2001), but already now we know that all the tasks will not be fulfilled at that moment, but that the project continues in 2002.

4.1. The Idea of the Senator

When starting to plan the new version of the Senator we had a seminar where different groups of knowledge professionals created a vision on what the new Senator should be like. And this is the vision we created:

Senator

- is a common, interactive, changing tool for work and a knowledge portal of and for the government, which
- supports the working processes and the culture of interaction, learning, and cooperation, and
- is based on user friendly technology and common standards, and
- is a coordinated aggregate with the intranets of the Ministries.

We wanted to emphasize, that the Senator should be genuinely common for the whole government, both in production and in use. By this we want to promote cooperation among Ministries and lower the barries among them. The lack of cooperation and the destructiveness of the bureaucratic competition among Ministries were understood as problems also by the earlier mentioned international analysis group.

4.2. Content and Functionality

When starting to plan the content of the first version of the intranet, the information needs were studied by recognizing the main tasks of the government, and then by studying what kind of information there was needed at each stage in the task processes. The main task processes examined were:

- national legislation-drafting process
- EU legislation drafting process
- national budget preparation process
- international agreements preparation process

When planning the 2nd version of the intranet we found that those task processes still are the central common processes. The information sources that form the content in the current version are still valid.

In addition we found that the management could use Senator as a tool in leading the government. We decided to plan profiles for:

- Professionals drafting a law
  Guidelines and legal information sources would be elements in this profile.
- Planners of finance
  Guidelines in national budget preparation process and other economic processes, and the documents resulting from those process would be the content of this profile.
- EU affairs
  The guidelines and access to the EU information sources would be the central elements in this profile.
- Leadership
  The results of the reform of the central government will be used. At the moment the central idea is to have the Government programme in focus, and build the profile around it. The following of the carring into effect of the Government programme, statistics and other information on the state of the society etc, structured according to the structure of the Government programme, would be elements in this profile.

The profiles are one possibility to navigate, but there are two other navigation options. One navigation contains:

- Calendars
- Current affairs
- News and media
- Parliament
- President of the Republic
- Government
- Ministries
- State administration
- Regional administration
- International organisations
- Statistics
- Country reports and maps
- Documents and Archives
- Literature and Research
- Dictionaries

The third navigation is planned to contain:

- Contact information
- Directories
- Training

- Working in the government
- Internal services
- Feedback
- Search
- Help

The intranet will be a database, and the information from other information systems shall be transferred to the intranet as automatically as possible. We try to avoid manual work, because there are only two persons updating the intranet.

The database also makes it possible to offer an interface to the material in Swedish language, which is the second official language in Finland. We are not planning to maintain the whole intranet in Swedish, that is, we are not translating anything, but only offer an easy access to the already existing Swedish material.

4.3. Personalisation

Even though the content and the structure of the Senator are praised, the users need selective services. The current version of the intranet contains a huge amount of information, and every user needs only a part of that. The profiles are one attempt to solve the problem, the personalisation is another.

As a technical basis for the personalisation we need a common directory, by which the user rights can be managed. The technology has not yet been decided – whether it is a LDAP (Lightweight Directory Access Protocol) directory or something else.

The common directory also makes possible single sign on: the user only needs one password, which opens the access to all those information systems, he/she has rights to.

We have licences to several commercial information systems. At the moment the access is based on IP numbers, and all users of the intranet have access to all information included in the intranet. This is not rational: it is expensive to buy access to persons who do not need that information, and secondly it causes information overload. Personalization means, that we can direct the services to the real users and that a user can choose that information, which he/she wants and needs. I emphasise, that this is not a question of censorship, but of better service.

4.4. Common metadata and XML

In order to realise the personalisation, we also need common metadata. Common metadata is a crucial factor for the developing of compatible information systems. Common metadata is needed not only for the information retrieval, but for the information transfer between information systems, too. For example, the web sites of the Ministries use common metadata and XML, when transferring e.g. press releases to the internet and intranet web sites of the government.

We have chosen Dublin Core metadata format. Dublin Core is only a format: you have to adapt it for use. We have created common metadata elements, such as a common thesaurus and a common subject classification. This makes it possible e.g. to organise the press releases according to the subject theme, regardless of the Ministry, which originally has produced the press release.

4.5. Search

Search is an important element in any intranet. It is quite simple to build a search function in one information system, which may have search engine of its ow. For a portal, which offers an access to various kinds of information systems with differing technology, the search function is a challenge.

4.6. Increasing Interaction

Increasing interaction, dialogue, networking and horizontal cooperation among Ministries is an important goal of the reform of the central government. The intranet can be a tool for that. The intranet cannot replace the face-to-face communication, but it can further it. The telephone catalogues or the "yellow pages" are commonly the most used parts in the intranets. The telephone catalogues can be processed as expert registers, where you can find not only the contact information, but also "who knows what".

The expert register is one of the most desired parts in the intranet. The problem is, that there are several information systems, which contain information on the personnel: several electronic telephone catalogues, the registers of the personnel departments, etc. Much overlapping work is done. We do not want to develop one incompatible register more, but to make use of the existing information systems. One idea is to use the common directory (LDAP or other) as a base for the expert register as well.

Another urgently needed element is a common forum for the working groups. The members of a working group may come from any institution, not only from Ministries. This is technically a challenge. A second challenge is to avoid double work. The government has no common document management system, but the Ministries may have their own systems, different from the neighbouring ministry. EU documents are an exception: a common system based on *Documentum* is in hand. The new common forum for the working groups should be planned taking account of the existing document managing systems, both at the ministerial and at the governmental level. The principle should be to avoid the double work.

4.7. Mobility

The intranet will be planned paying attention to the future mobile use of the intranet. One should be able to use the information also by cell phones and other equipments. Telephone catalogues are an example of information, which would be useful to reach by the cell phone.

1. Conclusion

The intranet can be an effective tool for knowledge management. However, it is only a tool. Knowledge management is a wider concept, when it is understood as promoting strategic development and knowledge and expertise in an organisation. Knowledge management and development of expertise require a strategic and holistic vision at the highest level of the organisation. If the organisation has no knowledge management, the possibilities of various tools - as the intranet - remain partly unused.

We look forward to the reform of the central government. We hope, that it results in a practical realisation of the ideas of knowledge management. Even though the decisions are to be made at the highest governmental level, we, information professionals, can by several means already now advance the ideas and values of knowledge management: openness, knowledge sharing, confidence, working and learning together.

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Japan InK - Distributing the Information Networked Knowledge (InK) Base to the Japanese Research Community

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Abstract:

Knowledge Management (KM) in relation to a shared cataloging system in Japanese university libraries (NACSIS-CAT) is introduced. Social background of one example of KM in Japan, as the context of KM, is discussed such as permanent employment, age seniority, government reformation are introduced. Figures and shape of NACSIS-CAT is provided for highlighting the need of knowledge management and KM techniques applied are introduced. Immediate demands for KM application and enhancement for university libraries in Japan is discussed in terms of the economic pressure; end-user orientation and internationalization

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Introduction
1 Japanese Scene
1.1 Knowledge Management
1.2 Working Environment
2 Knowledge Management in a Shared Cataloging System
2.1 NII/NACSIS Services
2.2 NACSIS-CAT
2.3 Training and User Support
3 Information/Knowledge Intensive Future of University Libraries

Introduction

Knowledge Management, promoted in Western industrialized countries during 1990s, is very new to Japanese organizations in general. Leading companies are being aware of the concepts and methods. However, for the majority of working places, of small and medium size organizations, knowledge sharing and its management have been carried out without awareness of the new Western concept. It is presumed that unconscious knowledge management is based on the employment structure. Majority of university libraries in Japan are of small and medium size organizations. KM in university library services is demanded to increase competences and productivity of, and acceptance by users (teachers and students). An example is introduced to show somewhat traditional means of knowledge sharing in the case of shared cataloging work. The Internet Web page is intensively applied for the purpose.

1 Japanese Scene

1.1 Knowledge Management

It was only early 1990s when Professor NONAKA Ikujiro presented SECI model.

Socialization: tacit knowledge: Parent to children; senior colleague to junior; learning by doing…
Externalization: explicit knowledge: description of the tacit knowledge
Combination: combining the explicit knowledge
Internalization: individualization of the explicit knowledge and experience leading to new tacit knowledge

The model suggests the evolving process of personal knowledge to group knowledge and the next step (field) of new personal knowledge. Evolution of concepts and application of Knowledge Management is still in progress (in knowledge creating spiral).

Context of knowledge (5W1H) depends on situation, person, time and relationship.[1] These factors shall be recognized for evaluating the knowledge.

- Situation: in what situation the knowledge is created or used.
- Person: by what position or by what role the person is playing
- Time: when the knowledge became useful
- Relationship: from who to whom

Concept and application of Knowledge Management has been "imported" to Japan in mid 90s. For example, the Knowledge Management Society of Japan (http://home.att.ne.jp/green/kmsj/index.html) was established in 1998. One special issue of Japanese professional journal in information services was published in 2000 devoted to knowledge management.

1.2 Working Environment

SECI model is of universal application. However, there are factors affecting the concept and application of knowledge management in Japan. The societal background should be taken into account when applying the KM concept to management and administration.

Permanent employment and salary scale according to age seniority is still the basic framework of employment. Permanent employment, generally speaking, is to get new job applicants fresh from schools, from junior high (15 years old), high school (18), undergraduate (22). They are supposed to stay a company until retirement (60). Some work for 38 years in a company, even the company faces merger with other company, still most of them remain in the new company.

Salary scale according to age seniority, generally speaking, offers equal wage to employees who are of same age and employed in the same year. Promotion in terms of ranks takes place with subtle consensus among the equal rank. Promotion exists in terms of bonus, but still it tries to be equal in a long run.

By these two basic frameworks of employment, workers get used to the working environment and work procedures. Employment is taken as a way to belong to a family. Training of new comers is carried out formally by the company and informally by the working team (family). Quality management is mutual education among the working team. Manual of work was introduced by IBM, MacDonald and Disney Land to Japan during 1970s, and coincided to the period of introduction of computers in business and commercial use. In other words, working method based on manual is still new, and limited to large organizations.

Top most companies are moving toward new employment systems based on head hunting and job hunting. There is a strong tendency among younger generation to get job temporally. Carrier development is revolutionary changing in Japan.

Regarding to university community, recent two developments will produce a cultural revolution: Government Reformation and reformation of national university into Independent Administrative Agency (IAA).[2] The national government has maintained national universities. When the national university will become IAA, then management of university will be changed, and management of university libraries will be changed. The libraries have suffered from the price rise of publication, IT investment, license fees of online journals, etc. This is the situation of Japanese university libraries facing to the knowledge intensive future.

2 Knowledge Management in a Shared Cataloging System

2.1 NII/NACSIS Services

The National Institute of Informatics (NII) was founded on April 1, 2000, as an Inter-university Research Institute, under the jurisdiction of the Ministry of Education, Science, Sports and Culture (MonbuKagakusho) in order to implement comprehensive research on informatics and to develop advanced infrastructure for science information.

Prior to the establishment of NII, the preceding organization was the National Center for Science Information Systems (NACSIS) established in 1986. The history goes back to 1973 to another ancestors. In 1984, a nation-wide shared cataloging system (NACSIS-CAT) was introduced. It was started by three national university libraries.

As of March 2001 NII offers the following services

- National backbone network for research (higher education) institutions (SINET)
- Online Shared Cataloguing / ILL transaction service (NACSIS-CAT)
- WebCat
- Database construction and access (NACSIS-IR)
- Electronic Library (scanned journal articles) (NACSIS-ELS)
- Online Journal Compilation Systems (NACSIS-OLJ)
- Web Site for Scholarly Community (Academic Society Home Village)
- Directory of Research Activities and Resources (NACSIS-DiRR)
- Recruit Web page for research positions (NACSIS-CIS)

2.2 NACSIS-CAT

NACSIS-CAT is a shared cataloging service participated by 1,700 libraries among 855 institutions, mostly university libraries. 24 libraries participate to NACSIS-CAT from overseas. Record registration is made about 30,000 records per day. WebCat, the national union catalog on the Web, is available to the public and there are 37,000 accesses per day.

Volume of NACSIS-CAT database

Monographs	bibliography	5.7 Million
	holdings	52.4 Million
Serials	bibliography	236,000
	holdings	3.5 million
Author authority		1.1 million
Uniform title		18,000
Serial Title Change		28,000

NACSIS-CAT offers ILL request function and processes 4,300 requests per day, which shares about 70 % of the total requests in university libraries. Average delivery is 4.5 days. The ratio of derived (copy) cataloging is about 95 % so that the original cataloging is done for 1,500 titles per day. 8,500 online terminals are registered, of which the number of active terminals are 3,000 at the peak.

The number of cataloger registered, as the NACSIS-CAT user is 4,600, and 95 % of whose work is derived cataloging. However, there is a tendency that the unique titles come together to small libraries in special subject field, or to large university libraries suddenly with short working time period. Here is the necessity of knowledge sharing for special cataloging.

Staff re-allocation happens in April every year. Some catalogers remain longer period, but there is always a possibility to accept new comers or complete layman as replacement. Literacy exists in every aspect and here also is the KM needs.

2.3 Training and User Support

NII/NACSIS offers a variety of training courses and user (cataloger) support. Training for online cataloging is three-days course. The cumulated total number of trainee is about 6,800 since 1986. Trainer (instructor) course is also run and 500 people graduated, then who became instructor in the regional training courses.

Instructors with experience are appointed from those who attended the trainer course. Training manuals are prepared based on the Nihon Cataloging Rules (NCR) for Japanese publication, AACR for English and other western language materials. Different versions of manual are allocated to courses in a rota to avoid clashing the target records in the training database.

In the end of the course, the trainees are asked to submit a questionnaire evaluating instruction, instructor, examples, explanations, etc. These comments are the source of review for the training method. Feedback is carried out through the questionnaire as well as questions raised during the course, by observing unexpected behavior of trainees, etc.

Online help is not provided, because NACSIS-CAT is a specialist application used by trained staff. However about 50 telephone enquires are made per year by complete beginner, re-assigned person in One-Person situation, and other reasons. Telephone enquires are handled by NACSIS-CAT office of three staff who administer the shared cataloging system among other work. Web pages are offered to NACSIS-CAT catalogers.

- "Online System Newsletter" (quarterly paper newsletter) (latest issue)
- Manuals in HTML and/or PDF
- Publications (web version of paper prints)
- Q&A database (1996-)
- Enquiry Web page

Q&A database service was started in 1996. It is searchable by keywords, topics, data fields, and types of database files such as monographs, serials, author authority files, etc. About 4,000 articles (topics) are stored and 700 articles were added during FY 2000. Articles are linked by topics, so that the related Q&A articles are specified by the record number and its title. In some cases, graphic data is attached to show, for example, the title page in question.

Discussion for revision was started in 1996, after 10 years of systems operation and matching to the development of "Client/Server model." A strategy was formulated to convert the entire system into that model by the year 2004 or 2005. When a new NACSIS-CAT system (i.e. Client / Server NACSIS-CAT) was introduced in 1998, Mailing list for both vendor and systems librarians was initiated. It holds 693 specialists members and 1,500 articles. Wording of the mailing list seem to be frank and friendly, probably quite similar to many other mailing lists. The list is accessible through the NACSIS-CAT Web Page with indexes by topics and by dates. It is also searchable with other databases and publications including the Q&A database.

So far, these methods and means of knowledge sharing with about 4,000 catalogers is carried out by these traditional newsletter on paper as well as online, Q&A database through Web, and the Mailing List. All of these methods may be taken as "traditional" Internet technique.

3 Information/Knowledge Intensive Future of University Libraries

Knowledge management of the shared cataloging systems, up to 2001, is largely based on the Internet Web pages. It combines people of specialization, educates each other. Information needs of the cataloger and quality control of the supplier (NII/NACSIS) are both met by these Web techniques. Catalogers and operator of the NACSIS-CAT are facing to future, and there are pressing demands for the information/knowledge intensive future: they are, among others, Economic pressure, End-user orientation, and Internationalization.

Economic pressure comes from the income structure. National universities in Japan are facing to become the independent administrative agency, and private universities are facing to decreasing enrolment (smaller student population). Expenditure structure is also pressed by the decreased human power in library by long term restructuring of university; IT investment; price rise of publication.

End-user orientation shall be recognized for library users. End-user of university libraries, i.e. researchers, teachers and students, are in competition ever more. They become IT richer day by day. For meeting information/knowledge needs, library strategies and tactics shall be sought in terms of knowledge supply and knowledge management.

Internationalization of knowledge services, of Japanese university libraries in somewhat isolation with other part of the world, is being noticed, since the recorded knowledge, especially on the Internet, runs quickly and limitlessly. Advanced users always go ahead of library services. Skill-up or KM of the library services is also demanded in this respect.

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Knowledge Sharing in a Learning Resource Centre by Way of a Metro Map Metaphor

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Abstract:

This paper presents a Knowledge Sharing project at the Aarhus School of Business. As a result of a close co-operation between the Faculty of Modern Languages and the Library of the Aarhus School of Business a Learning Resource Centre (LRC) is being established. The LRC serves as an exploratorium for the development and the testing of new forms of communication and learning, at the same time as it integrates the information resources of the electronic research library. The Library of the Aarhus School of Business acts as a facilitator and is the hub of the learning environment responsible for the development of methods and tools for the common platform of knowledge sharing. In an interaction between the professional learning environments, the Library and an external IT development environment, it is the objective to create models for Intelligent Knowledge Solutions that can contribute to form the learning environments of the School in the 21st century.

Keywords
Knowledge Management, Knowledge Sharing; Guided tour; Navigation; Hypermedia; Metro Map metaphor; Library portal; Learning Resource Centre, LRC; Intelligent Knowledge Solutions

1. Introduction

This paper presents the results of a co-operation so far achieved between the Faculty of Modern Languages at the Aarhus School of Business and the Library of the School. The objective of the co-operation is to create a room for knowledge sharing and at the same time to develop tools that contribute to facilitate knowledge sharing in a modern international environment of education and research at the Aarhus School of Business. With the Library of the School as the centre of rotation the co-operation has up to now resulted in the establishment of a Learning Resource Centre (LRC) which primarily is aiming at servicing students, teachers, and researchers at the Faculty of Modern Languages of the School. The LRC is placed in close connection with the premises of the Library of the School and is in process of continued development.

The LRC has been established in close co-operation between researchers, teachers, and library. The co-operation has been impelled by an urgent need of initiating experiments with new forms of learning and education, new forms of evaluation of the studies, and new ways of giving students, teachers, and researchers access not only to quality-assessed information resources, but also to selected learning resources and to the related technology support. Realizing that the information resources of the electronic research library constitute an increasingly important supplement to the study preparatory work of the university students and to the facilitation of learning, to the acquisition of knowledge and to the spreading of research results for the education, the Library develops a range of new services that bring the Library into the central position as a natural facilitator in the learning environment. The LRC is first and foremost thought as an "exploratorium for new forms of learning".

The exploratorium makes knowledge available via a web-based user interface. The user interface has associations of a METRO map. The metro metaphor has proved suitable because it is simple and at the same time a fascinating model that most people know from their everyday lives. The metaphor gives a general view and is useful for structuring a very large amount of web sites. With a metro map it is difficult to get lost. All along you can follow a predefined search route for the drive of the journey from station to station on a key map. You can even get off and on as you like, without losing track of where you are. The chosen Metro metaphor is based on the use of the open hypermedia system called Webwise. The Library has chosen to use the metaphor as a basis for constructing paths in the form of guided tours to the learning and information resources in the LRC.

2. The Need for New Learning Environments

In recent years the study and learning environments at the institutions of higher education in Denmark have changed character. The students still follow the conventional courses of lecture, but the responsibility for own learning is constantly increasing, and to a large extent they work problem-based and project-orientated. They primarily work in groups or teams. New forms of study make heavy demands on the teachers and the students as to organize and co-operate to solve the tasks set. For example, today the students need more than earlier to meet between the lectures. They need to be able to get information and source material for preparing their seminars and projects. In this serious working process, they have a constant need for being able to contact teachers as well as information specialists in order to get advice and guidance. New and different physical and intellectual demands on facilitation of the study and working process thus arise, something that is a quite natural consequence of the modern teaching methods.

The frames earlier set by the traditional classroom and lecture-room education do not suffice. The students of today need to meet in seminar rooms with facilities, and where access is given to a wide range of quality-assessed information resources – printed and electronic – and user support tools side by side with teaching materials and learning tools. Add to this the need for having the opportunity to consulting professionals – preferably all the 24 hours.

This draws a picture only of the traditional students studying in the daytime at the universities and the institutions of higher education. Distance learners and students studying part time have specific needs. Not to speak about the students of tomorrow of, for example, Denmark's Virtual University. These last mentioned groups are students with whom the learning environment and the Library can only interact via the internet – via electronic user interfaces and in virtual net-based learning environments. To support studies and learning of such dimensions is a new and enormous pedagogical challenge to all institutions of higher education and research libraries, and it is a challenge that we have to prepare ourselves to meet.

2.1 Demands on the Research Library in the New Learning Environment

The research libraries do what they can to develop and to adjust facilities and frames to the changed study and learning conditions. The libraries have always provided reading desks and access to literature. But most institutions have had to admit that in recent years it has been more than difficult to satisfy the massive demands from the students on multi-faceted study facilities.

- On one hand silent reading rooms for individual concentration and, on the other, group rooms for loud discussions and talk.
- Access to printed as well as electronic information resources. The latter requires lots of hardware.
- Continued wish that the Library gives access to different kinds of software that are used in connection with the study, again something that requires lots of hardware.
- Wish that the supervisors are regular visitors to these combined libraries/study facilities – in order to guide the students in professional matters – or that it is possible to establish an electronic dialogue – preferably all the 24 hours.
- Unlimited opening hours.
- Last but not least, a wish for the Library to be a drop-in centre. A place where you can concentrate, but at the same time a place where you can take refreshment while reading today's paper. Food for the mind does not suffice – even for intellectual youngsters!

The new rooms of the research library are to a higher degree to be formed as modern learning workshops. Facilities for library services, education, and breaks are to melt into a whole. It is time to admit that the students of today have a changed profile and changed study behaviour. Therefore, the new demands and the changed behaviour have to be taken into account when establishing the learning environments of tomorrow.

2.2 The Changed Typology of the Students and the Framework for Learning

The typology of the students has changed concurrently with important changes in society and on the labour market. A typical staff member has six to eight jobs in the course of his or her career. In future, appointed on a contractual basis and for a limited period of time, one will actually be a student following courses of further education all through life. The variation in age, social status and ethnic extraction will be much wider than today. Many new users will attend the system of higher education all through their working lives. To the young people on the educational market it applies that they often are active on the labour market as well. The need for access to more flexible learning environments is therefore rapidly increasing.

The students will to a still larger extent need to have the options of tailored educational programmes – "just in time – just for me". From being passive recipients of learning the students of today are more active players who are critical of the learning situation and will consequently contribute to change the performance of the teacher. A new generation is on its way into the system of higher education, the so-called "Nintendo Generation". It consists of young people who during their childhood have learned by non-linear methods. A characteristic of this generation is that they take a look at the graphics first and do many things in parallel. They seek interactive and funny learning experiences. If the institutions of higher education shall be able to provide meaningful and relevant educational options, it is a must that learning environments are developed to improve improvisation, exchange of ideas and which offer an educational substance that is generated by bringing the total knowledge capital of the educational environment in play – i.e. researchers, teachers, information specialists – and that all this takes place through a barrier-breaking co-operation across the professional environments – educations and library.

In the 1990's many beautiful and functional research libraries have been built in Denmark. Everywhere it has been tried to take due account of the development and to look into the crystal ball. This has resulted in fantastic buildings. However, we also experience that it has been difficult to foresee the new needs of the users. At any rate, we must realize that the organization that today forms the framework of many Danish research libraries is tightening in relation to the news users' wishes and needs.

2.3. Learning Resource Centre – what is it?

The demands made by the users on modern study and learning facilities cross not only the organization of the individual library, they challenge the organization of the entire institution of higher education – across professional areas. A close co-operation to solve the total facilitation task is therefore not only an opportunity, but a mere necessity, if it is to succeed. The centre of rotation of such a co-operation can physically be a Learning Resource Centre, which just now is being realized in various disguises.

There is no unambiguous definition of what a Learning Resource Centre is. In the US learning resource centres have been known for years, but the concept has been given a somewhat different meaning, and the contents have been a little different from what we in the Nordic Countries like to acknowledge. Our differentiation between what is offered in the traditional library and in a LRC normally is the following:

	Learning Resource Centre	**Traditional library**
Relation to the learning environment	A LRC is based on interaction with teachers – and pedagogical support functions. The "teaching and learning"-concept implies that it is not directly assumed that education alone leads to learning.	The contact to the educational sector has so far primarily been based on one-sided servicing of research and education. The library has facilitated the education without having been directly involved in the learning situation.
Guidance	Guidance also includes the use of IT in connection with the traditional reference service.	Only to a limited extent has the guidance included IT-technical support.
Holdings	Dynamic net-based information resources and printed media side by side with electronic educational programmes and courseware for e-learning.	More static holdings
Work stations	Large number of work stations for groups of students, teacher-controlled work stations, seminar rooms, exploratorium for learning.	Work stations and traditional reading rooms
User behaviour and premises	The students can work in a LRC all the 24 hours as a learning workshop. Open and flexible framework and organization.	The users can use the library in the opening hours. Traditional framework of a library.
Staff to service the users	Librarians, information specialists and staff with specific IT professional qualifications.	Librarians and, to some extent, staff with professional qualifications.

Comparison of a Learning Resource Centre and a traditional library
Source: Guldbraar 2000: 36-37 .

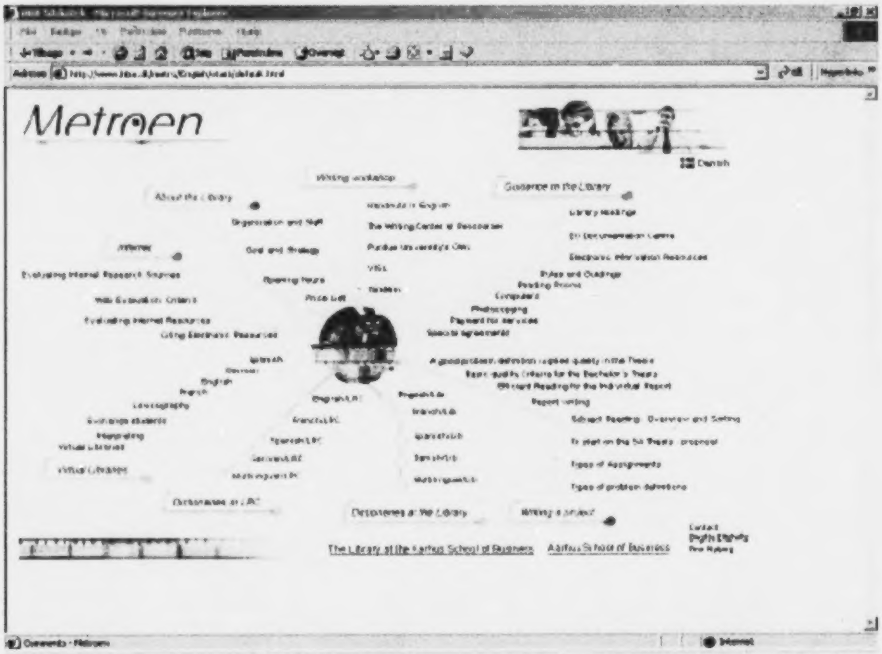
2.4 Learning Resource Centre (LRC) at the Aarhus School of Business

In September 2000, the Library of the Aarhus School of Business opened a LRC. As already mentioned the centre was established in close co-operation between the Faculty of Modern Languages and the Library of the School. In the centre attempts are made to meet a plurality of new demands on learning facilitation. Thus the centre at a time becomes a physical entity, as is the Library. But at the same time the aim is to make electronic information resources and learning tools available via a portal that has a well-arranged and clear user interface accessible all the 24 hours.

The centre has primarily been organized as a workshop for learning. It is used as an exploratorium for development of new forms of education, learning and evaluation as well as a laboratory for training of teachers who are to act as facilitators in the new learning environments. The resources of the centre are a lot of hardware

– i.e. 70 IT workstations – but most important is the lot of software in the form of study tools, CALL programmes, dialogue tools, course packages, and user support tools as well as the access to the quality-assessed information resources that can be reached from here. All tools and information resources are accessible via the METRO – a user interface developed in co-operation between teachers and researchers at the Faculty of Modern Languages, a research environment emerged from the Department of Computer Science at the University of Aarhus – Hypergenic A/S – and the Library of the Aarhus School of Business.

The METRO allows a graphically oriented user an easy navigation round the information and learning resources displayed in the show window of the electronic study of the LRC. The interdisciplinary co-operation between philologists, the Library, and IT developers has been a great and exciting challenge. The entire concept of the LRC is based on a strategy for KNOWLEDGE SHARING across professional competence and development environments.


Metroen
Danish
Writing workshop
Guidance in the Library
About the Library
Organisation and Staff
Goal and Strategy
Opening Hours
Computers
Photocopying
Payment for services
Report writing
Types of Assignments
Virtual Libraries
Documents at the Library
Writing a project
The Library of the Aarhus School of Business
Aarhus School of Business
Contact

Source: The metro map metaphor used as guidance system in the Learning Resource Centre at the Aarhus School of Business

3. Knowledge Sharing in a Learning Resource Centre

The Learning Resource Centre of the Library of the Aarhus School of Business rests basically on six columns. The columns are pillars in the strategy that underlies the decision of organizing a co-operation about knowledge sharing between the educational environment and the Library as the central foundation for the establishment of the learning exploratorium.

The fact is that the LRC is more than a matter of the library, it is also more than just a physical reorganization of the library. The LRC calls for fundamental changes of the pedagogical rationale of the Aarhus School of Business, and the establishment of the learning exploratorium will therefore have enormous professional, organizational and educational implications for the learning environment of the Faculty of Modern Languages and of the School as a whole. And not only that – the exploratorium will also gradually influence the co-operation with the surroundings of the School, including the ministries responsible, among other things, in relation to the future planning of study programmes and evaluation methods. For these reasons alone, the establishment of the LRC demands new thinking of the pedagogical practice. Discussions have thus been started

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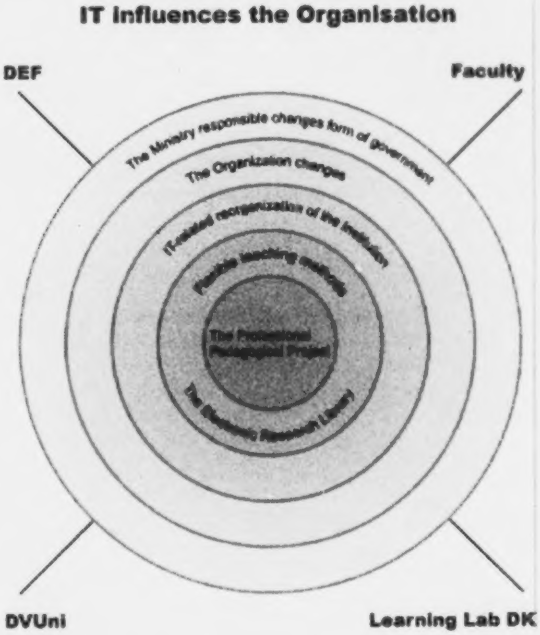
about change of organizational forms and new demands on organization of future classrooms. Precisely because of the many complications that surround the establishment of a LRC, it takes a long time. Quite naturally, the LRC idea meets with reservation and resistance in some circles and with enthusiasm in others. It is therefore of utmost importance that the professional environments and the management of the whole educational institution have an eye for the organizational challenges that follow in the wake of the establishment of a LRC and take their time to have this debate.


IT Influences the Organisation
DEF
Faculty
DVUni
Learning Lab DK
The Ministry responsible changes form of government
The Organization changes
IT-related reorganization of the Institution
Flexible teaching methods
The Professional Pedagogical Project
The Electronic Research Library

The model illustrates how the professional pedagogical project and a knowledge sharing project influence the internal and external environment of the organization.

3.1 Strategy for Knowledge Sharing in the Learning Resource Centre of the Arhus School of Business

The six columns mentioned form the foundation of the knowledge sharing strategy upon which the Learning Resource Centre of the School and the co-operation between the Faculty of Modern Languages and the Library are based.

The starting point of the establishment of the LRC has been to get in step as to the aim of the strategy:

- Why share knowledge in the LRC of the School?
- Which knowledge do we want to share?
- With whom to share the knowledge made available?
- How is the knowledge going to be shared?
- How are knowledge sharing and learning going to be integrated?
- How is knowledge sharing going to be facilitated?

The purpose of the School in establishing a LRC is to create the best possible framework for facilitation of the learning environment of the students and of the teachers and researchers. It has been agreed that the best way to achieve this is to collect and share all the knowledge that exists in the two environments and thus establish a barrier-breaking co-operation that builds upon the multi-faceted qualifications that the environment contains.

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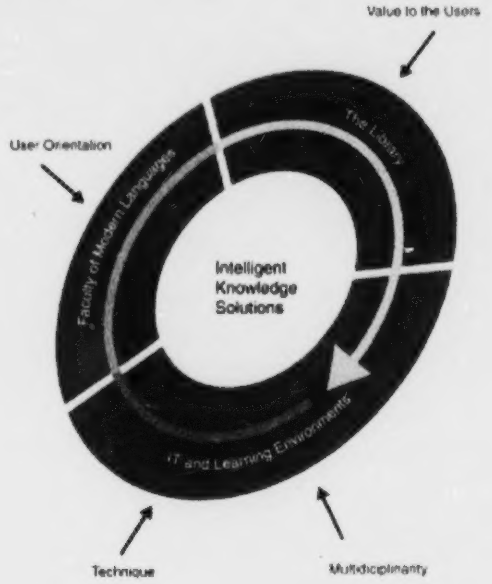
Add to this a close dialogue and a development co-operation with experts from the internal and external IT environment who have know-how and knowledge of the tools that can support the expertise that the two environments contain, then a basis is constituted – other things being equal – for creating "Intelligent Knowledge Solutions". Intelligent Knowledge Solutions are solutions that arise in the synergy of the interaction between people and in consideration of the surroundings that the solutions are to be a part of. With the general view and the user orientation as constant components of the intelligent solutions an *increased value* is created for the users – the students and the learning environment.


Value to the Users
User Orientation
Faculty of Modern Languages
The Library
Intelligent Knowledge Solutions
IT and Learning Environments
Technique
Multidiciplinarity

Source: Tove B. 2001

Knowledge Sharing generates Intelligent Knowledge Solutions

Knowledge sharing is a means to generate Intelligent Knowledge Solutions.

Demanding new students and the need for the development of new forms of learning, examination, and evaluation, as well as the ability of the educational establishment to continue to attract the best students in the intensified and global pursuit of the competent students, is a challenge to every institution of higher education in these years – and also to the Aarhus School of Business. The electronic research library will experience its actual breakthrough when the rapidly increasing number of net based information services are capable of facilitating the learning environment with learning and information services that are *tailored* for the users and experienced as an *integrated part* of a learning portal. With their basic competence within quality assessment, sorting, classification, and making materials accessible, the librarians are qualified for a close interaction with the teachers regarding the selection of the contents of the learning portal and the technological opportunities to facilitate teachers and students. In the dialogue between teacher and library the Library of the Aarhus School of Business has experienced the emergence of quite new role models for learning that can only develop in environments where there is a *will* to share knowledge.

3.2 Facilitation of Knowledge Sharing in the LRC of the Aarhus School of Business

IT is well on the way to be fully integrated and a principal platform in all respects at the Aarhus School of Business. Knowledge sharing and team management are new forms of co-operation with which experiments have been done in the new learning environments. The learning and the communication of knowledge are

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individualized, personalized, and democratised. New concepts are on the way for the teacher's new role as coach, initiator and facilitator, and also the new role of the individual learner as the actual centre of education – with the pedagogical, psychological and social aspects involved, is new in the learning environment.

Also the development of the research, nationally as well as internationally, can be strengthened considerably by technology support. The existing internal and external, national and international researcher networks and groups can optimise the co-operation far more by including, for example, client and web based conference systems as well as video conferences, and the spreading of research results can take place at a markedly more rapid pace and to a markedly larger circle, whereby the scientific discussion can go into quite another depth and to quite another extent than is known today. Here the Library has an important role to play.

However, knowledge sharing does not only take place in the physical meeting between teacher and library. Knowledge sharing also takes place virtually through the electronic tools that, for example, support the selection of materials, the personal contact arrangements, maintenance of the virtual libraries, by the composition of the electronic course packages and regarding the composition and the clearing of the information made available in the teacher's syllabus. At the Library of the Aarhus School of Library we have gained rich experiences by presenting and communicating in virtual surroundings. Both in relation to distance learning students and part-time students and to a limited extent in relation to virtual university students. It is our belief that precisely these two target groups to an increasingly higher degree will represent our group in the future, and the librarians will have to gear up for offering the corresponding service. The electronic research library is ready to be fully integrated in the virtual offers of education and courses of the future. The bid of the Library of the Aarhus School of Business for this integration implies a close co-operation with the teachers regarding the creation of electronic educational packages.

As was the case in creating the best possible physical framework for study and learning, the interdisciplinary qualifications have to be in play in order to obtain the best results. To prepare the best electronic educational offers, with parts of the electronic information resources of the Library integrated, these have to be taken into account early in the process, and the dialogue between teacher and library is to start already here. Experience shows that the partners can inspire one another in this course and thus enrich the finished educational offer. An intensified interdisciplinary co-operation between the professional environment and the library is therefore crucial, in case the study and learning environments of the future are to offer the optimum service.

4. Take the Metro to New Knowledge – The Software Used to Create the METRO

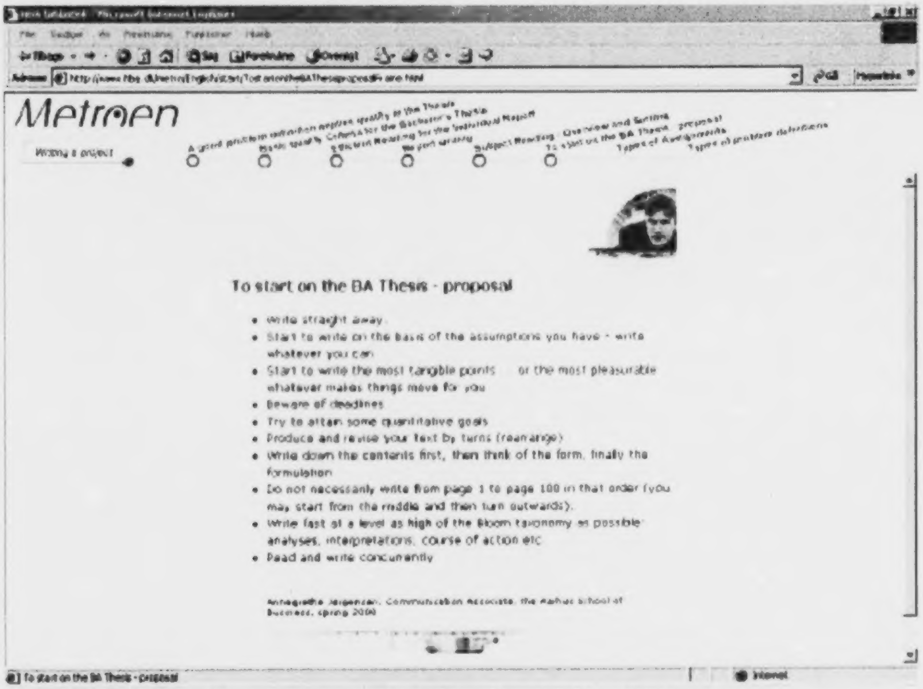
The Library of the Aarhus School of Business has chosen to develop a knowledge distribution platform for its Learning Resource Centre – called the METRO. The METRO is developed as a portal and a guided tour that - as already mentioned - are based on the use of the software application Webvise, now marketed under the name of WebNize 1000.

The Webvise system is a full-blown open hypermedia system, which has been extended by an integrated guided tour editor and viewer as well as a generator to export guided tours in plain HTML and PNG formats for access through a browser only. The Webvise Guided Tour Systems are inspired both by the classical hypertext research and the recent initiatives on the WWW, and it attempts to take further steps in the direction of supporting users in navigating through prepared presentations of subjects. Besides the inspiration from the classical hypertext system, we have been inspired by ideas of simplified metro or bus maps to communicate information on routes in a complex city. An idea inspired by a handcrafted library web page at Chalmers, Sweden.

4.1 The Metro Map Metaphor

Usage of the metro metaphor in guided tours has shown to be a highly successful technique for providing an overview over a set of web documents because the metaphor is very intuitive. Everybody knows how to read route maps for metros and busses. The main idea in using the metro map in the guided tour in the LRC is to

consider each major subject in the web information as a route on the metro map. When the reader wants to know something about a certain subject he just "takes the metro" on the route that deals with the subject. If the student is quite unfamiliar with the subject he could start at the central metro station – in the middle of the map – whereas more experienced readers can get on the metro further out on the route.
Metro maps are used to provide an overview when entering the information infrastructure, by showing an general view of all the routes. But the metro map has more to offer. Inside the metro wagons a horizontal map is shown with the stations on the route, which stations have already been visited and which stations are yet to be visited. This has inspired the presentation of a route map above the web document that is associated with each station, as will be shown in the following.


Metroen
Writing a project
Subject Reading - Overview and Sorting
To start on the BA Thesis - proposal
Types of Assignments

To start on the BA Thesis - proposal

- Write straight away.
- Start to write on the basis of the assumptions you have - write whatever you can
- Start to write the most tangible points or the most pleasurable whatever makes things move for you
- Beware of deadlines
- Try to attain some quantitative goals
- Produce and revise your text by turns (rearrange)
- Write down the contents first, then think of the form, finally the formulation
- Do not necessarily write from page 1 to page 100 in that order (you may start from the middle and then turn outwards).
- Write fast at a level as high of the Bloom taxonomy as possible: analyses, interpretations, course of action etc
- Read and write concurrently

The figure illustrates the route map generated from the guided tour editor
Source: LRC The Aarhus School of Business 2001.

The learning and information resources of the LRC at the Aarhus School of Business are presented to the users as Guided Tours, as exemplified above.

5. Conclusion and Future Work

This paper has presented the experiences from a knowledge sharing project initiated at the Library of the Aarhus School of Business in the autumn of 2000. The Library and the Faculty of Modern Languages have established a Learning Resource Centre that builds upon a jointly accepted strategy for knowledge sharing resting on six pillars where the Library of the Aarhus School of Business has the role as the hub of the development of the frames and the facilities that are to secure an integration of the information resources of the electronic research library and which create new learning environments and a common platform for knowledge sharing.

At present the LRC forms the framework of the facilitation of learning and serves gradually as an exploratorium for learning. A learning workshop where teachers, researchers, meeting the new demanding types of students, can test new forms and methods of education, where new methods of evaluation and test forms can be

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developed, where new pedagogical conquests can be tested in experimental forums, and where relevant resulting research can be initiated.

It is the aim that the LRC is gradually to develop Intelligent Knowledge Solutions. Intelligent learning and knowledge solutions are often complex. The solutions can therefore be made by utilizing all the multi-faceted qualifications that are among the teachers, researchers, and information specialists at the Faculty and the Library, and in consideration of the surroundings that the solutions become a part of.

The technological platform used by the Library of the Aarhus School of Business to establish a knowledge sharing system is a guided tour system integrated in the Webvise open media system. The Library chose the Webvise tool because it includes a series of the qualities that make it suitable for structuring large amounts of information and make them accessible in a clear and user friendly way. Status of the guided tour system is now that it is an integrated part of the Webvise system, which is being developed and used for a number of portal projects. The tool is now marketed under the product name of WebNize 1000 and WebNize 100. In connection with the further development of the LRC the development co-operation with the software company Hypergenic A/S will be continued and intensified. In this way, Intelligent Knowledge Solutions can be created in the future as a result of knowledge sharing and development co-operation, not only between researchers, education and the Library of the Aarhus School of Business, but through knowledge sharing that also includes involvement of experts from external IT development environments.

Acknowledgements

The Metro Map metaphor was inspired by the Chalmers Library guide (http://educate2.lib.chalmers.se/demopath.html), and part of the development of the Webvise Guided Tour System was developed by Mjølner Informatics a/s (now: Hypergenic a/s) under contract with the Library at the Aarhus School of Business (LASB). I wish to thank the following people at Mjølner Informatics a/s: Elmer S. Sandvad, Lennart Sloth and Professor Kaj Grønbæk, Department of Computer Science, University of Aarhus, for their work on developing the METRO as a part of the open hypermedia system called Webvise. (Webnize). Thanks to Kirstine Stougaard Thomsen, Technical Director, for the co-operation on developing the Metro concept further so that it can be a useful tool for knowledge sharing in the new flexible, net-based learning environments that will to be made available in Denmark's Virtual University.

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Vitae

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She has a BA librarianship from 1970 and a M.Li.Sc. degree from The Royal Danish School of Librarianship in Aalborg from 1992. In December 1999, Tove Bang was internationally awarded as "Business Librarian of the Year 1999" by The Gale Group, at the Online ´99 in London, for initiatives to the reorganization and development of the electronic research library.

The Library of the Aarhus School of Business is one of the twelve large research libraries of Denmark that is a main actor in the establishment of Denmark's Electronic Research Library (DEF). The Library has a staff of approximately 35 full-time equivalent, is experimental and, in recent years, has taken the initiative in carrying through a series of important development projects together with the professional environment of the ASB and with the electronic research library as the hub of the development. www.lib.hha.dk

67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	**060-100-F**
Division Number:	**II**
Professional Group:	Geography and Map Libraries
Joint Meeting with:	-
Meeting Number:	100
Simultaneous Interpretation:	-

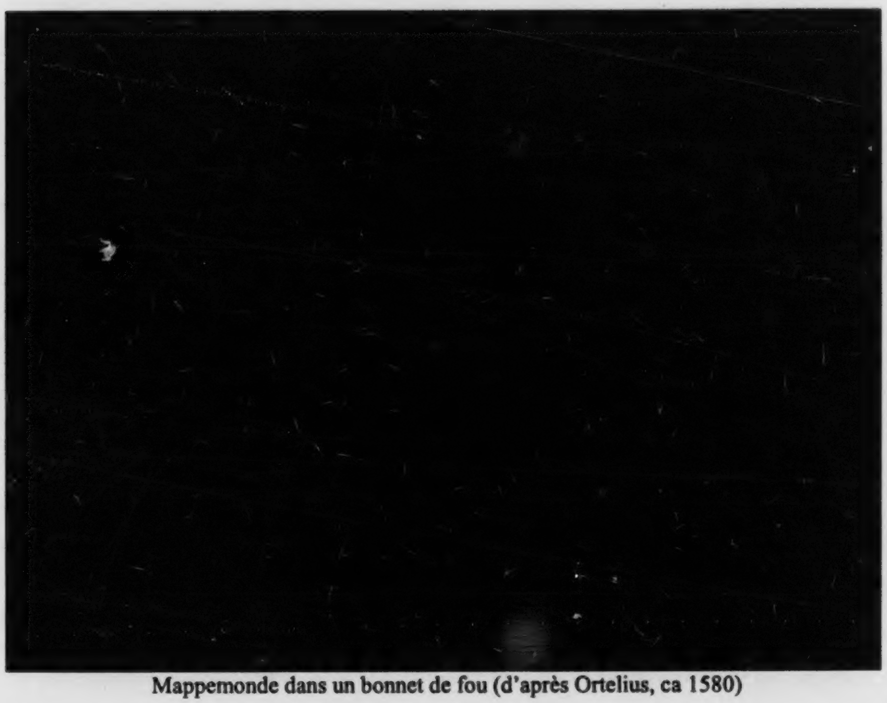
La numérisation des documents cartographiques anciens : supports traditionnels et nouvelles technologies

Pierre-Yves Duchemin
Bibliothèque nationale de France

Résumé

La numérisation de documents graphiques, et notamment de documents cartographiques, est depuis longtemps un sujet d'étude à la Bibliothèque nationale. Dès sa création en 1994, la Bibliothèque nationale de France a prévu d'offrir à ses utilisateurs, un grand nombre d'images numérisées à partir de ses collections patrimoniales : elle s'adresse aux chercheurs, aux enseignants et aux étudiants et vise également un public plus large car les collections importantes de documents cartographiques ne sont pas nombreuses en France. Cette communication, centrée sur les documents cartographiques, aborde les divers problèmes qui se sont posés pendant la réalisation du projet.

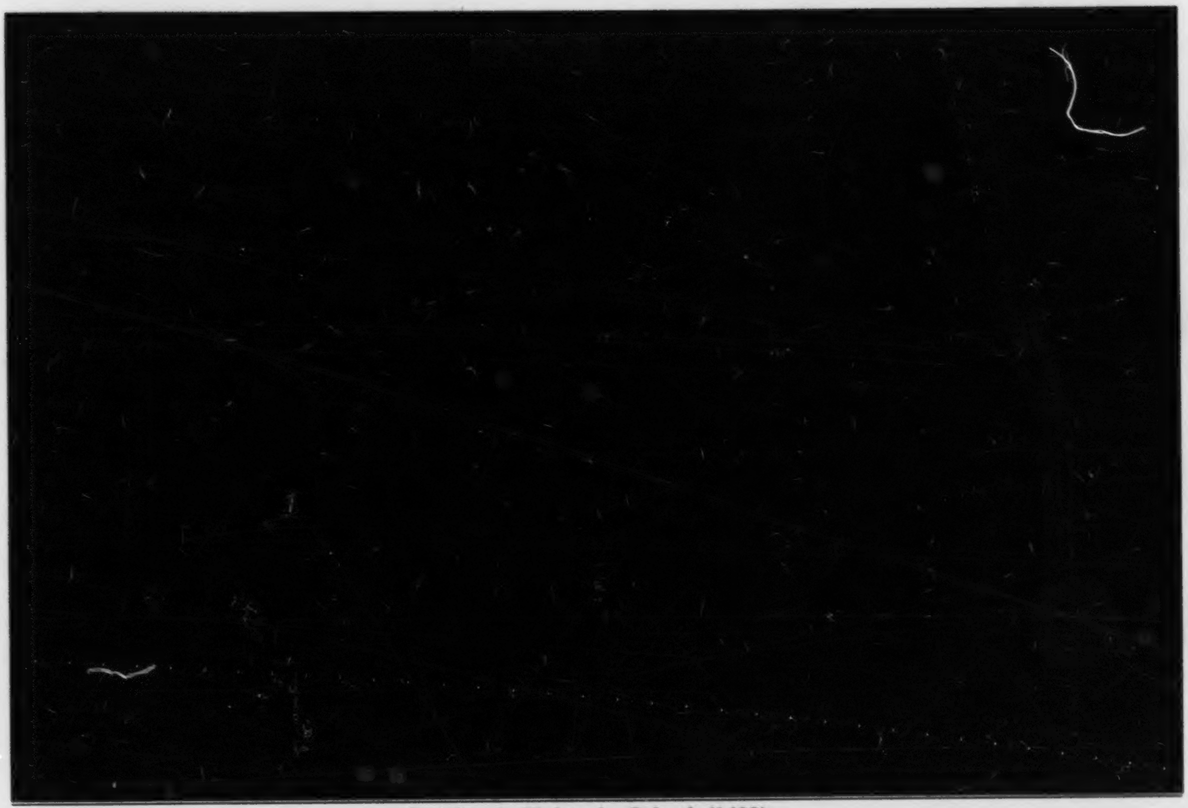
Par ailleurs, la Bibliothèque nationale de France a produit des documents édités sur CD-Roms : « Mappamondi : une carte du monde au XIVe siècle » qui est une représentation numérique de l'Atlas Catalan, « Les globes de Louis XIV : la terre et le ciel par Vincenzo Coronelli », « La Géographie d'Idrîsî : un atlas du monde au XIIe siècle ».



Mappemonde dans un bonnet de fou (d'après Ortelius, ca 1580)

1. - Historique des projets de numérisation d'images à la Bibliothèque nationale de France

La numérisation de documents graphiques, et notamment de documents cartographiques, est depuis longtemps un sujet d'étude à la Bibliothèque nationale : en 1989, fut produit un vidéodisque analogique sur la « Révolution Française » qui contenait des documents cartographiques de la fin du XVIIIe siècle. En 1991, un partenariat avec une société californienne pour numériser la collection de 437 portulans conservés au département des Cartes et plans et les éditer sur CD-Rom a été sur le point d'aboutir mais n'a pu voir le jour en raison de la loi française très stricte en ce qui concerne la propriété intellectuelle et l'usage du patrimoine national : le ministère de la Culture, tutelle administrative de la Bibliothèque nationale, n'a pas accepté cette procédure.



Portulan de Christophe Colomb (1492)

Dès 1994, la Bibliothèque nationale de France a prévu d'offrir à ses utilisateurs, dans un premier temps physiquement présents dans ses salles de lecture, dans un second temps distants, un grand nombre d'images numérisées à partir de ses collections patrimoniales ; en offrant la consultation d'images numériques réalisées à partir d'une partie de ses collections, la Bibliothèque nationale de France s'adresse évidemment à son public naturel, c'est-à-dire aux chercheurs, aux enseignants et aux étudiants de second et troisième cycle. Mais elle vise également un public plus large, bien connu depuis longtemps sur le site Richelieu, où sont conservées toutes les collections spécialisées ouvertes aux chercheurs, aux étudiants... et au « grand public », car les collections importantes de documents spécialisés, et notamment cartographiques, ne sont pas nombreuses en France.

Bien que ce programme ne soit pas destiné à une catégorie précise du « public à distance » de la Bibliothèque nationale de France, il n'en favorise pas moins, de par sa nature et ses caractéristiques, certains usages auxquels l'offre numérique existante n'apporte pas toujours une réponse satisfaisante : curiosité ponctuelle quant à la nature des collections, découverte plus détaillée de leur diversité, connaissance plus approfondie d'une catégorie de documents ou d'une pièce précise – sans que cela soit exclusif de la satisfaction de demandes plus spécialisées ou plus érudites, qu'autorise la reproduction d'un certain nombre de pièces dans leur intégralité. L'insertion de ce programme dans l'offre numérique doit tenir compte de cette dimension d' « introduction aux collections » par l'établissement de liens avec les différentes composantes de cette offre numérique et certaines parties du site (Présentation des départements).

La variété des documents conservés sur le site Richelieu, ainsi que l'importance de la volumétrie des collections à traiter - on approche les 20 000 000 documents - montre combien il est difficile de concevoir une sélection et de maintenir une politique cohérente à l'intérieur de l'institution quand on doit traiter des documents aussi nombreux et aussi différents dans le cadre d'un projet de numérisation.

Bien qu'à la Bibliothèque nationale de France, la géographie ne soit pas considérée comme un champ spécifique de la connaissance - elle est traitée comme une discipline transverse et les documents cartographiques sont disséminés dans plusieurs départements, même si le département des Cartes et plans est le plus gros réservoir de représentations du monde - les collections retenues montrent une cohérence intellectuelle interne et sont prévues pour avoir une existence propre, avec des buts scientifiques et / ou artistiques, en tant qu'« unités documentaires ». Cette méthode permet d'éviter l'inconvénient qui consiste à offrir des ensembles thématiques incomplets.

2. - Critères de sélection

Parmi les critères qui ont présidé au choix des collections, les images numériques ont été créées pour :

- permettre la préservation et la conservation du document original, notamment en ce qui concerne les documents de grand format ou les documents très fréquemment consultés,

- permettre la mise en valeur de collections en les ouvrant à un plus large public, grâce notamment à la transmission à distance,

- favoriser la mise en valeur de collections patrimoniales et prestigieuses de documents rares à valeur documentaire ou esthétique, souvent non publiés, en publiant des disques optiques compacts ou des Cd-webs,

- améliorer les possibilités d'accès au document en proposant un substitut électronique à l'utilisateur final,

- permettre un accès multiple au document,

- autoriser une communication plus importante et plus savante du document grâce à l'utilisation de stations de travail spécifiques (poste d'accès à la bibliothèque numérique = PABN) qui permettent à l'utilisateur d'effectuer des zooms et d'obtenir une finesse de détails qu'il ne pourrait espérer à partir de l'original,

- offrir à l'utilisateur final une copie électronique du document sur un outil de travail spécifique dans un nouvel environnement technique,

- permettre des sorties payantes sur imprimante de qualité, à l'intérieur de l'établissement,

- un dernier critère a été la complétude et la cohérence de la reproduction photographique, ainsi que la présence de notices bibliographiques informatisées, sur fiches ou sur catalogues imprimés.

Enfin, en France, la situation juridique sur l'utilisation des images numériques n'est pas simple : les lois de propriété et de protection intellectuelle sont très strictes et on doit toujours rechercher d'éventuels ayant-droits. C'est la raison pour laquelle les projets d'images numérisées de documents cartographiques concernent des documents anciens, pour lesquels n'existent pas de problèmes de communication ou de reproduction, puisqu'ils appartiennent à la Bibliothèque nationale de France depuis des années, voire des siècles.

3. - Projets d'images numériques de documents cartographiques

La première opération de numérisation d'images a consisté en la réalisation de 260 000 images de « non-livres », parmi lesquelles plusieurs dizaines de milliers de documents cartographiques, de plans d'architecture, de photographies à caractère ethnologique, etc.

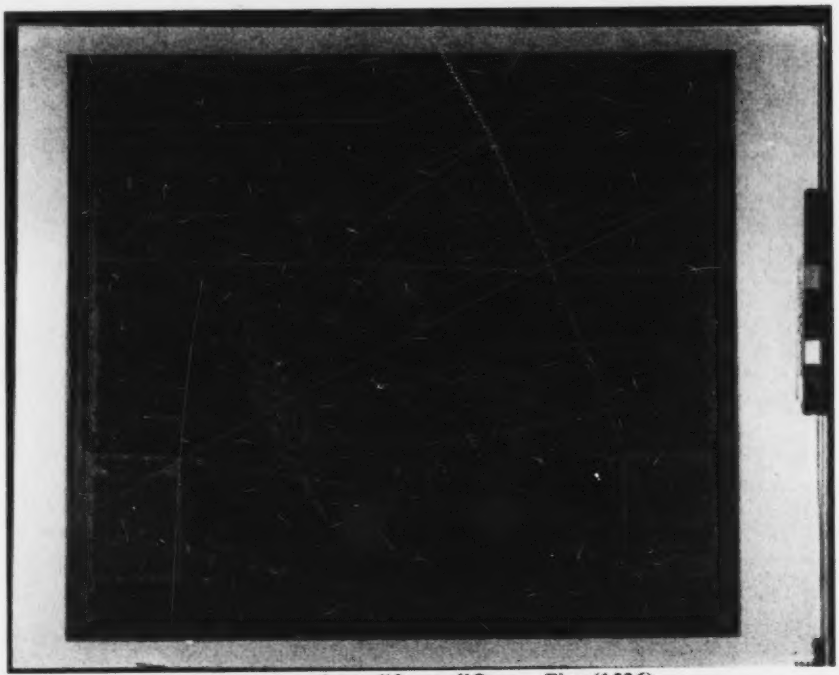
Parmi les 11 projets mis en œuvre, 7 sont relatifs à des documents cartographiques ou nécessitent une indexation géographique : cartes de France, d'Europe, du Monde et du ciel des XVIIe et XVIIIe siècles de la collection d'Anville, plans d'architecture du XVIIIe siècle dessinés par Boullée et Lequeu, dessins et gravures de villes et de paysages français du XVIe au XIXe siècle de la collection Destailleur, photographies en noir et blanc de la Société de géographie prises en Afrique par les explorateurs français au XIX^e siècle, photographies de Paris en noir et blanc prises par Eugène Atget, photographies en couleurs de villes et de paysages français prises au cours des années 1980 pendant les missions DATAR, etc. Cette première série d'images numérisées est centrée sur la France, mais les nouveaux projets à l'étude possèdent une couverture géographique plus importante.

Les projets réalisés à la Bibliothèque nationale de France concernent des documents appartenant à :

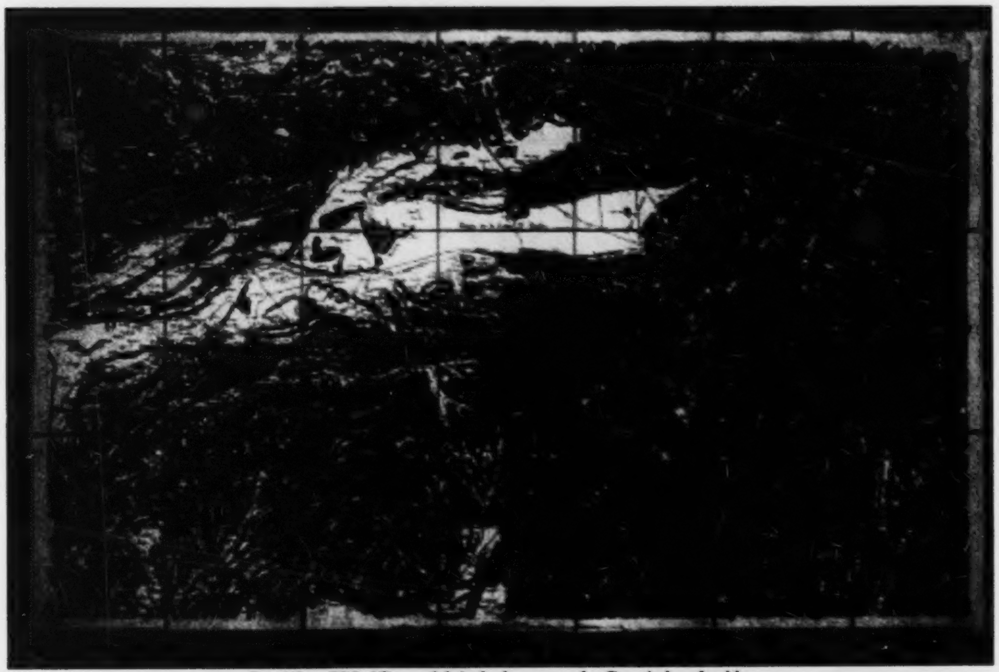
- département des Cartes et plans (1 400 000 documents) qui regroupe cartes manuscrites, gravées et imprimées, atlas, globes, objets géographiques, dessins et notes d'explorateurs, photographies, plaques de verre, etc., de la plus ancienne carte connue à l'imagerie satellitaire, ainsi que les collections de la Société de géographie (livres, périodiques, cartes, photographies, plaques de verre, etc.).

Parmi ces collections, le choix s'est porté sur la prestigieuse Collection d'Anville (1697-1782) :

Parmi les 10 500 documents, dont un grand nombre d'*unica*, qui composent la collection réunie par Jean-Baptiste Bourguignon d'Anville au XVIIIe siècle et qui couvrent la terre entière, le projet de numérisation concerne 2 408 documents cartographiques libres de droits représentant la France, les provinces, les généralités, les diocèses, etc. du XVIe au XVIIIe siècle, c'est-à-dire globalement l'organisation administrative, politique et religieuse de la France sous l'Ancien Régime, quelques cartes d'Europe, quelques mappemondes et quelques cartes du ciel. Est également incluse la première couverture régulière de la France réalisée à partir de 1747 par les Cassini, dont une version coloriée à la main en toises ayant appartenu à la reine Marie-Antoinette et une version noir et blanc métrique, pour laquelle un taux de résolution plus élevé a été nécessaire (4 000 x 6 000 points par pouce, soit 180 fichiers de 90 Mo, si l'on utilise la version couleur. La carte de Cassini pourrait faire l'objet d'une édition dans la collection « Sources » ; ce document représente en effet une mine toponymique pour la France de l'Ancien Régime. La numérisation des 4 346 images de la collection d'Anville (cartes en plusieurs feuilles) a été effectuée à partir de cibachromes 13 x 18 cm (microfiches monovues). Le catalogage a été effectué à la feuille dans BN-Opaline et certaines notices ont été regroupées en lots cohérents (cartes des diocèses, cartes des provinces, carte de France de Cassini, Gaule, assemblage de 5 à 6 feuilles représentant un cours d'eau, etc.).



Mappemonde cordiforme d'Oronce Fine (1536)



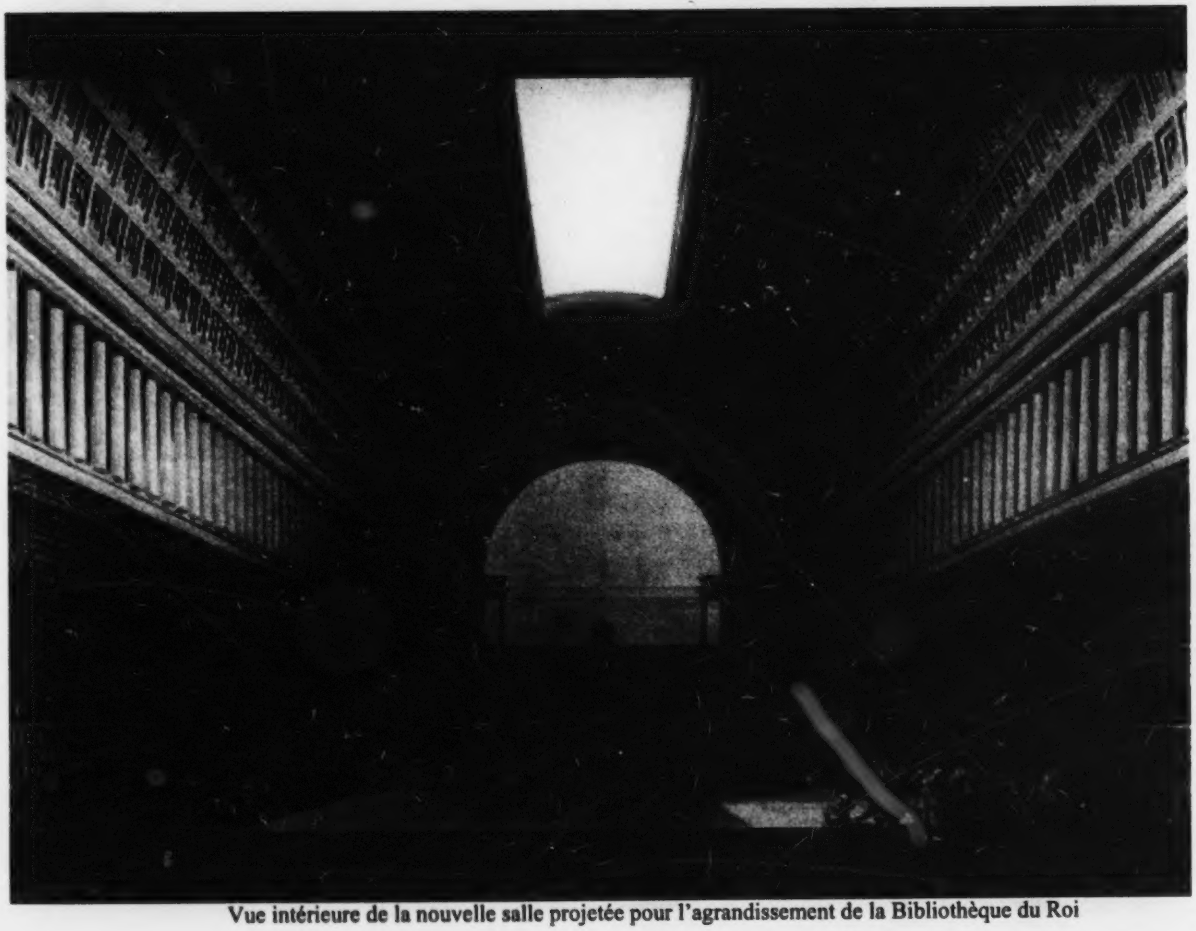
Feuille n°99 (Grenoble) de la carte de Cassini coloriée

- département des Estampes et de la photographie : plusieurs millions de documents, parmi lesquels on dénombre cartes, panoramas, plans d'architecture, etc.

Le choix s'est porté notamment sur les collections de documents produits par les deux architectes visionnaires du XVIIIe siècle Boullée et Lequeu, qui n'ont jamais dépassé le stade du dessin architectural.

- Dessins d'architecture d'Étienne-Louis Boullée (1728-1799)

120 pièces (dessin ou lavis) de grand format (150 x 50 cm) dont quelques documents concernant la Bibliothèque royale, notamment l'installation d'une verrière au dessus de la Cour d'honneur pour en faire la Salle de lecture. Quantitativement peu important, ce projet est néanmoins d'un intérêt considérable : en effet, hormis la collection du département des Estampes, on ne compte qu'une quinzaine d'autres documents de Boullée conservés dans le monde. La numérisation a été effectuée à partir d'ektachromes 24 x 30 cm. Le catalogage a été effectué à la pièce, par numérisation, reconnaissance optique de caractères et conversion d'un catalogue imprimé en format Intermarc dans BN-Opaline, et les notices ont été regroupées en lots centrés sur un bâtiment ou un projet.



Vue intérieure de la nouvelle salle projetée pour l'agrandissement de la Bibliothèque du Roi

- Dessins d'architecture de Jean-Jacques Lequeu (1757-1825)

713 documents (aquarelle ou lavis) de grand format (jusqu'à 3,5 x 1,5 m). La numérisation a été effectuée à partir d'un microfilm couleur 35 mm. Le catalogage suit exactement les mêmes principes que ceux utilisés pour le projet Boullée.

- Collection Hippolyte Destailleur

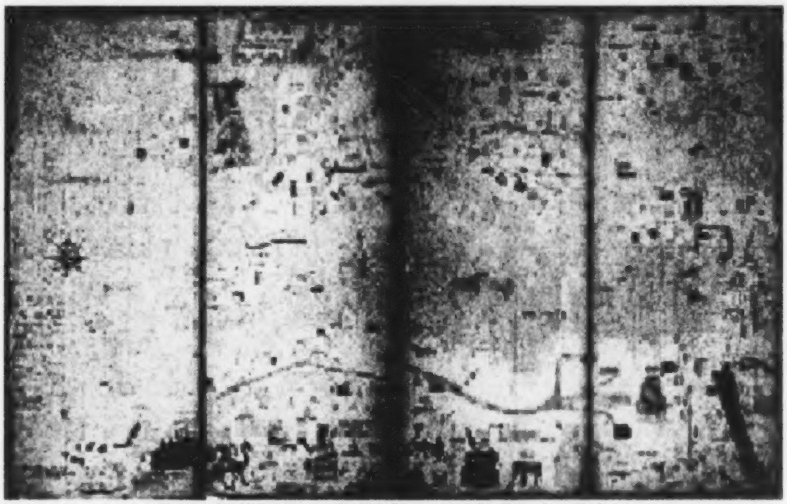
4 906 documents (dessin, aquarelle, lavis, gouache, gravure, etc.) de moyen format (40 x 30 cm) représentant des sites de Paris (1 328 documents) ou de province (3 578 documents) du XVIe au XIXe siècle. Certains documents étant recto-verso, le total de ce projet atteint plus de 6 000 images. La numérisation a été effectuée à partir de diapositives couleur 24 x 36 cm. Le catalogage a été effectué à la pièce, par numérisation en interne, reconnaissance optique de caractères et conversion en format Intermarc dans BN-Opaline de catalogues imprimés et les notices ont été regroupées par arrondissement pour Paris et par département pour la province.

- département des Manuscrits : quelques documents cartographiques manuscrits.

- Manuscrits médiévaux à peinture

Parmi la sélection de 12 729 pages provenant de 143 manuscrits choisis parmi les plus « représentatifs » des trésors de la Bibliothèque nationale de France, ce « florilège » inclut les documents de la bibliothèque de Charles V, déjà utilisés pour le projet « 1 000 enluminures sur Internet ». La numérisation a été effectuée à partir d'ektachromes 24 x 30 cm ou 4 x 5 pouces pour la majorité des manuscrits et de diapositives couleur 6 x 6 cm.

C'est parmi les manuscrits que se trouve la première application d'imagerie numérique sur l'Internet de la Bibliothèque nationale de France : la page d'accueil du site Web de la BNF contient une base de données graphiques spécifique intitulée « 1 000 enluminures sur Internet ». Cette base de données a été inaugurée en septembre 1995 pour l'inauguration de l'exposition « Culture et pouvoir » à la Bibliothèque du Congrès de Washington. Sept manuscrits à peinture du XIV^e siècle, la période de Charles V, le fondateur de la Bibliothèque nationale, ont été numérisés au taux de 2 000 x 3 000 points par pouce et présentent plus de 850 images zoomables plein écran et accessibles par menus (textes et liens hypertexte vers d'autres textes ou des images, thèmes avec une structure arborescente à 3 niveaux ou feuilletage des manuscrits). Parmi eux, l' « Atlas catalan » par Abraham Cresques, daté de 1375, représente l'état du monde connu à cette époque et constitue le chef-d'œuvre de ce projet. Ce portulan comporte 6 feuilles de vélin, pliées en leur milieu et montées sur des ais de bois, chaque feuille mesurant 64 x 49 cm. L'original a été photographié sur des cibachromes 4 x 5 pouces et numérisé au taux de 2 000 x 3 000 points par pouce pour les feuilles entières et au taux de 4 000 x 6 000 points par pouce pour les détails. Plus de 50 détails sont disponibles.



Carte de l'Europe, de l'Afrique et du Proche-Orient

Caravane traversant la route de la soie

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4. - La numérisation des documents cartographiques

Cette communication est centrée sur les collections de documents cartographiques numérisés, parmi lesquelles on trouve des documents parmi les plus intéressants, mais aussi parmi les plus difficiles à numériser et à exploiter correctement, pour trois raisons principales :

- d'une part, les documents les plus intéressants, les plus rares, les moins connus, proviennent souvent des collections spécialisées et ils sont en outre un excellent choix en ce qui concerne la conservation, la communication, la valorisation et les publications,

- d'autre part, les documents cartographiques, en particulier en raison de leur taille et de la précision des informations qu'ils contiennent, soulèvent des problèmes tant pratiques que techniques très difficiles à résoudre pour pouvoir obtenir une bonne qualité et une utilisation efficace des images numériques,

- enfin, à l'inverse d'une page imprimée qui est très « binaire » et ne contient généralement que des points noirs ou blancs, la numérisation de documents cartographiques relève plus de « l'artisanat », à la fois par la manipulation du document, notamment s'il présente un format qui sort de l'ordinaire, et par l'utilisation de l'image numérique que l'on peut en obtenir.

La Direction des collections, dans laquelle se trouvent les départements qui conservent les collections de la Bibliothèque nationale de France n'est pas seule engagée dans le processus de numérisation : elle partage cette responsabilité avec la Cellule « numérisation » du département de la Bibliothèque numérique et le département de l'Audiovisuel. À l'origine du projet, un des principaux problèmes à résoudre a été de faire admettre aux autres partenaires que les documents cartographiques n'étaient pas tout à fait des documents comme les autres : le marché était prévu pour la numérisation de 300 000 « images » avec un taux de résolution de 2 048 par 3 072 points par pouce. On savait déjà, depuis les tests initiaux, que ce taux était insuffisant pour une bonne utilisation d'images numérisées à partir de documents cartographiques. Ces derniers ont nécessité une procédure particulière afin d'obtenir à l'écran une lecture satisfaisante des toponymes et des détails graphiques : ils ont été numérisés au taux de résolution de 4 000 par 6 000 points par pouce.

Lors de la phase initiale de tests, la question s'est posée de savoir si la numérisation devait être effectuée à partir du document original ou d'un substitut photographique. À l'époque, dans les années 1995-1998, les plus grands numériseurs existant en France ne pouvaient pas traiter de documents à plat de plus de 1,20 m pour les numériseurs à rouleaux ou de plus de 2 m de largeur pour les caméras numériques les plus performantes. Tous les documents sélectionnés dans les projets de numérisation n'atteignent pas de telles dimensions et, dans la plupart des cas, il est possible de numériser un document à partir de l'original, même si les tests montrent que la numérisation d'un inversible couleur de haute qualité donne les mêmes résultats que celle d'un document de taille moyenne. Le problème est différent en ce qui concerne les documents cartographiques dont la taille ne permet pas une numérisation directe : aujourd'hui, il existe des caméras numériques capables de traiter des documents de 4 x 3 m et de restituer l'image en 3D si nécessaire.

En fait, la réponse a plutôt été l'option de la numérisation d'un support photographique : nous étions dans le cadre d'un marché global de numérisation de documents graphiques, parmi lesquels des documents cartographiques et des plans d'architecture. Parmi ces derniers, quelques-uns des plans d'architecture dépassent 3 m de longueur : il est évident qu'ils n'ont pu être numérisés directement et qu'on n'a pas pu faire l'économie d'une campagne photographique. Dans le même ordre d'idées, la carte de Cassini est une mine incomparable en ce qui concerne la toponymie française du XVIIIe siècle ; il importait donc que l'ensemble des toponymes, quelle que soit la taille de leur typographie, soit distinctement lisible.

La Bibliothèque nationale de France dispose d'une photothèque riche de plusieurs millions de substituts photographiques (microfiches, microfilms, cartes à fenêtre, microfiches monovues, inversibles couleur, inversibles noir et blanc, ektachromes de grand format (jusqu'à 24 x 30 cm), cibachromes, etc.). On aurait pu penser *a priori* que ce trésor allait apporter la solution, mais si l'on en croit les experts en conservation, un inversible couleur réalisé il y a

5 ans n'est plus complètement parfait et un inversible couleur réalisé il y a 20 ans peut être inutilisable, même s'il a été conservé dans un environnement protégé et favorable ; ils soutiennent également que la durée de vie d'une microfiche noir et blanc peut atteindre une centaine d'années, mais il n'était pas question d'utiliser des substituts noir et blanc pour offrir l'image numérique de documents en couleur. On a pu constater que les experts en conservation avaient raison et que nombre de supports photographiques ne présentaient plus un niveau de qualité suffisant. Dans quelques cas, il a été possible d'utiliser des inversibles couleur qui commençaient à virer en leur appliquent une légère correction chromatique selon la charte colorimétrique définie, mais de nombreux documents ont dû faire l'objet d'une nouvelle campagne photographique.

Lors de la sélection des projets, la nature, la couverture et la qualité des reproductions photographiques existantes ont été un important critère de choix : il n'est pas concevable de numériser des cartes à partir de diapositives 35 mm 24 x 36 mm ou de microfiches. Les tests ont montré que les meilleurs résultats étaient obtenus à partir de cibachromes 4 x 5 pouces, d'un piqué plus fin que les ektachromes 24 x 30 cm. Certains projets ont nécessité une campagne photographique complémentaire pour assurer la complétude ou refaire des prises de vues mieux adaptées à une campagne de numérisation que les clichés existants : il a fallu dans certains cas refaire certaines prises de vues de documents dont on pensait la couverture photographique terminée.

Eu égard à la grande quantité d'images à numériser dans le cadre du projet, il est apparu que 300 000 images dépassaient les capacités techniques de la cellule de numérisation et il a été décidé de confier la numérisation proprement dite à des entreprises extérieures dans le cadre d'un marché. Après le lancement d'un appel public à la concurrence et la rédaction d'un cahier des charges, les offres de quatre prestataires ont été retenues, chacun d'entre eux montrant une expertise dans la numérisation de tel ou tel support photographique.

Dans le cas des documents cartographiques, la numérisation a donc été effectuée à partir des cibachromes 4 x 5 pouces au taux de résolution de 4 000 x 6 000 points par pouce, afin de permettre à l'utilisateur d' « entrer » dans l'image numérique et d'effectuer un zoom sur un détail géographique ou toponymique. Cette procédure, utilisée pour les documents cartographiques, garantit une grande qualité mais coûte nettement plus cher que la numérisation réalisée au taux de 2 000 x 3 000 points par pouce pour les autres documents graphiques.

Dans le cadre particulier des projets de la Bibliothèque nationale de France, le marché passé auprès des 4 prestataires prévoit la numérisation par chacun d'eux de 3 000 images par semaine. En outre, le marché stipule que le prestataire doit numériser en même temps, non seulement l'image elle-même, mais également la « légende ». Celle-ci est généralement composée d'un ensemble de champs extraits de la notice bibliographique, de la référence du cliché au Service de la reproduction qui permet la commande directe d'une reproduction photographique, ainsi que de la clé de la notice bibliographique dans la base de données, utilisée comme lien hypertexte. Le système prévoit, en cas de réponses multiples à une requête, l'organisation des réponses en mosaïques d'imagettes (16 à 32 selon les projets) qu'il est possible, par un simple clic de la souris, d'afficher plein écran et/ou de sélectionner dans un « panier » consultable en fin de requête.

Exemple de légende :

> Nolin, Jean-Baptiste (1657-1708). - Roiaume et duché de Septimanie... / dessignée par J.B. Nolin. - [S.l.] : [s.n.], [17e ou 18e siècle]. - 1 carte : 36 x 45,5 cm. - [Cote : BNF C.Pl. Ge DD 2987 (368), microfiche 86/244. - FRANCE-- Sud-Est-- Frontières -- 0561-0752. 16e ou 17e siècle. - SEPTIMANIE. 16e ou 17e siècle. \ Opaline 074046.

Le résultat est tout à fait lisible sur l'écran 17'' du poste audiovisuel (PAV), et est encore meilleur sur l'écran graphique 21" du poste d'accès à la bibliothèque numérique (PABN). Malheureusement, le poste audiovisuel est doté d'un imageur qui ne permet pas le zoom au-delà de 200 % et une nouvelle solution technique est à l'étude. Si la consultation d'une image numérique sur un écran graphique ne pose pas problème et permet la lecture des toponymes sur une carte, le problème est la taille gigantesque des fichiers à traiter : une carte ancienne, c'est-à-dire un document pas très détaillé, peut dépasser 400 Mo..., même si la compression permet de le réduire à environ 10 Mo en haute définition ou 300 Ko en basse définition. Certains documents particulièrement détaillés se mesurent en Go…

Cette qualité de consultation a pu être obtenue grâce à un sévère contrôle de qualité tout au long de la chaîne de travail et notamment lors du retour des supports de numérisation : la vérification de la conformité à la charte colorimétrique et la vérification de l'adéquation des légendes à l'image font l'objet d'un examen particulièrement attentif. L'utilisation de normes, à la fois pour la numérisation, la compression des données, l'exploitation et la communication est également un facteur de qualité. Cette normalisation est un pari sur l'avenir : les données seront toujours plus importantes que les supports physiques. Le support peut évoluer, mais les données restent, notamment si elles possèdent une structure normalisée et sont conservées dans un environnement favorable.

En ce qui concerne le support d'exploitation, c'est-à-dire le serveur, des machines spécifiques, de type Sequant possédant un espace de stockage se chiffrant en tera-octets sont utilisées.

5. - Catalogage et indexation

Le problème du traitement bibliographique des documents numérisés a dû être résolu avant les opérations de numérisation. Sur ce point encore, de nombreuses questions se sont posées : l'image numérique est-elle un document à part entière ou un simple support de substitution ? Doit-on cataloguer les images numériques à l'unité ou bien par lots ? Dans le cas des documents cartographiques, la réponse a été de cataloguer tous les documents à la pièce, même s'ils appartiennent à un ensemble plus large, artificiel ou non. En outre, l'image numérique d'un document est considérée comme un substitut de ce document, comme un ektachrome ou un microfilm, ce qui permet de lui faire subir le même traitement intellectuel et la même indexation que le document original.

La solution qui consiste à cataloguer chaque document comme une unité documentaire séparée et à créer des liens entre eux afin d'obtenir un ensemble dans la base de données s'avère longue et coûteuse. Les documents originaux ayant été catalogués à l'unité dans la base de données BN-Opaline, il a suffi d'ajouter une adresse logique aux descriptions bibliographiques et de créer un lien réciproque afin d'obtenir aussi bien l'image numérique à partir de la notice de description bibliographique dans la base de données que la description textuelle à partir de l'image. L'utilisation d'un catalogage capable de gérer des notices analytiques ou un catalogage à niveaux a permis de lier précisément une ou plusieurs images numériques à une notice textuelle contenue dans un ensemble plus important. La conversion rétrospective d'un fichier ou d'un catalogue imprimé, par numérisation et reconnaissance optique de caractères, a été utilisée pour obtenir un catalogage à la pièce. Pour un plus grand confort d'utilisation du système de recherche par l'utilisateur, les projets sont organisés en lots, grâce à des notices de regroupement.

Les ISBD, les normes AFNOR, les formats MARC et les listes raisonnées d'indexation matières (LCSH, RVM ou RAMEAU) ont été utilisés alors que la structuration électronique des données, l'hypertexte, l'indexation en « langage naturel » et l'interrogation en texte intégral sont en plein développement. Les bases de données disponibles à la Bibliothèque nationale de France ne permettaient pas l'expérimentation de solutions plus modernes. Les projets en cours (« Voyages en France », qui associe textes et images, « Mémoires », qui se veut une vitrine de la diversité des collections de la Bibliothèque nationale de France) sont réalisés grâce à des DTD et une structuration en XML.

La base BN-Opaline a bénéficié dès la fin de 1995 d'un accès Telnet, remplacé en mars 2001 par un accès Web, mais ces accès ne concernent que la base de données elle-même et ne fournissent pas les liens à l'image. C'est pourquoi un appel d'offres a été lancé en mars dernier pour la rédaction d'un schéma directeur d'une nouvelle informatisation des collections spécialisées, dans lequel l'utilisation de métadonnées et le lien à l'image numérique dans une structuration XML seront ?

6. - Coût de la numérisation

Bien que le coût de la numérisation soit en baisse constante depuis le milieu des années 1990, le coût total d'une campagne de numérisation est élevé, particulièrement si l'on choisit des taux de résolution importants, mais l'on doit garder à l'esprit que le coût de la numérisation ne comprend pas la seule numérisation, mais couvre également les éventuels coûts de restauration, les éventuelles campagnes photographiques, le catalogage, l'indexation, les différents supports physiques, les postes de travail spécifiques munies d'écrans graphiques « haute définition », etc.

7. - Les réseaux

L'établissement a dû définir ses besoins :

- combien d'utilisateurs sont susceptibles de se connecter simultanément ?
Actuellement, 1500 ports sont disponibles simultanément,

- quelles images doit-on rendre disponibles pour l'accès à distance ?
La décision a été prise de ne fournir en accès par l'Internet que les images libres de droits, qui ne représentent pas l'intégralité des fonds numériques disponibles à la consultation sur site,

- combien d'images doit-on rendre disponibles pour l'accès à distance ?
La montée en charge progressive du projet fait que chaque mise à jour apporte son lot de nouveautés à la Bibliothèque numérique,

- quelle qualité d'image numérique doit être disponible sur le réseau ?
Il est tout à fait possible de consulter un document à un taux de définition très élevé à l'intérieur de l'établissement et d'offrir une image numérique de qualité inférieure sur le réseau ; cette question est déterminante et structurante en termes de flux de données et de temps de réponse.

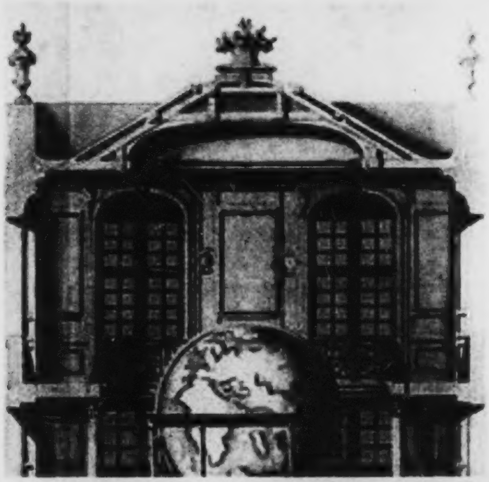
Cette volonté de l'établissement de permettre la fourniture d'images à distance a soulevé des questions : les images sélectionnées sont libres de droits et c'est la Bibliothèque nationale qui détient les droits sur les images numériques. À la fois pour offrir à l'utilisateur des temps de chargement acceptables et pour ne pas risquer le piratage, la Bibliothèque nationale de France a décidé de fournir sur l'Internet des images de qualité dégradée. Si cette procédure est envisageable pour beaucoup de documents graphiques, elle n'est pas intéressante pour les documents cartographiques : en effet, la carte de Cassini qui apparaît en image plein écran non zoomable en qualité dégradée est inutilisable. Ce problème va être réglé par la fourniture de l'image complète en qualité dégradée accompagnée d'extraits en haute définition.

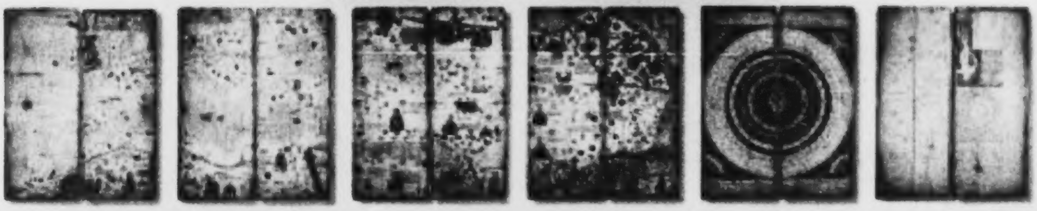
Aujourd'hui, la bibliothèque numérique Gallica fournit aux utilisateurs distants de la Bibliothèque nationale de France près de 50 000 documents graphiques.

8. - L'édition de CD-Roms

Par ailleurs, à partir de ses collections de documents numériques, la Bibliothèque nationale de France produit des documents édités sur CD-Roms. La collection « Sources » a pour objectifs de présenter sur CD-Rom une sélection des plus importants documents conservés par la Bibliothèque nationale de France et faisant partie du patrimoine de l'humanité. Ce choix d'édition permet de rendre accessibles des documents qui, du fait de leur état ou de leur fragilité, sont difficilement manipulables et donc rarement consultables.

Chaque document fait l'objet d'une reproduction très fidèle par numérisation à haute résolution et offre les mêmes opportunités de consultation que l'original ; la possibilité d'effectuer des zooms à quatre paliers sur des détails améliore même la consultation que l'on pourrait effectuer sur le document original. Ces « fac-similés électroniques » s'adressent à un large public qui peut ainsi déchiffrer pas à pas le document, puis élargir sa recherche grâce aux qui mettent l'accent sur les thèmes abordés, ainsi que sur le contexte historique et artistique de l'époque à laquelle le document a été réalisé. Ces commentaires sont rédigés en trois ou quatre langues selon les CD-Roms.





Enfin, une dernière partie du CD-Rom propose une série d'outils logiciels qui permet à l'utilisateur de « s'approprier » le document grâce à des « carnets » et à des « calques ». Les carnets et les calques sont stockés sur le disque dur de l'ordinateur de l'utilisateur et gardent la trace des notes, observations et analyses rédigées par l'utilisateur, ainsi que des extraits d'images ou de textes qui lui semblent particulièrement intéressants à conserver.

Parmi les documents cartographiques publiés dans la collection « Sources », on peut citer :

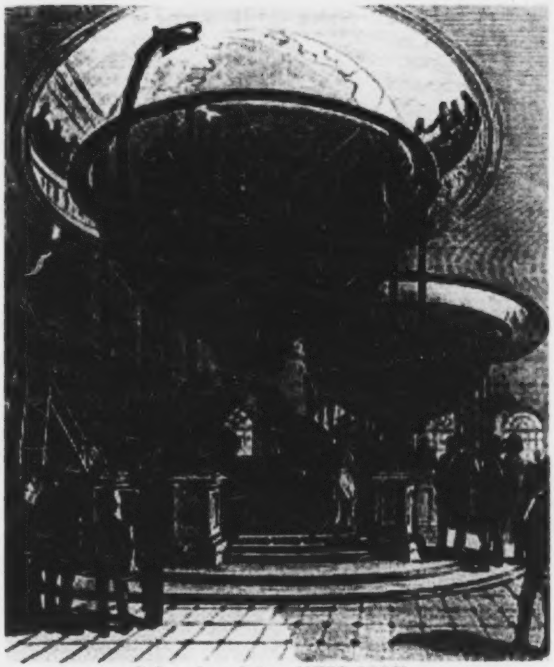
- « Mappamondi : une carte du monde au XIVe siècle » qui est une représentation numérique de l'Atlas Catalan de 1375 (Ms Esp 30), avec commentaires en français, anglais, allemand et espagnol, qui reproduit le monde connu à l'époque.

L'atlas catalan (1375)

- « Les globes de Louis XIV : la terre et le ciel par Vincenzo Coronelli », une exploration du globe terrestre et du globe céleste, chacun de quatre mètres de diamètre, réalisés pour Louis XIV à la fin du XVIIe siècle.

Projet de Louis-Étienne Boullée

Détail du globe terrestre



Salon des globes (1782-1900)

- « La Géographie d'Idrîsî : un atlas du monde au XIIe siècle » (Manuscrit oriental 2221). En 68 planches et une mappemonde, cet atlas, « divertissement de celui qui est passionné » pour la pérégrination à travers le monde », est replacé dans le contexte du milieu du XIIe siècle et décrit le monde connu en multipliant les itinéraires et les informations aussi bien historiques, économiques que descriptives, voire anecdotiques.

09/05/2001 12:45

Et juste pour le plaisir…

Gaule par Ptolémée (Ulm, 1482)

Carte de France par Tavernier (1628)

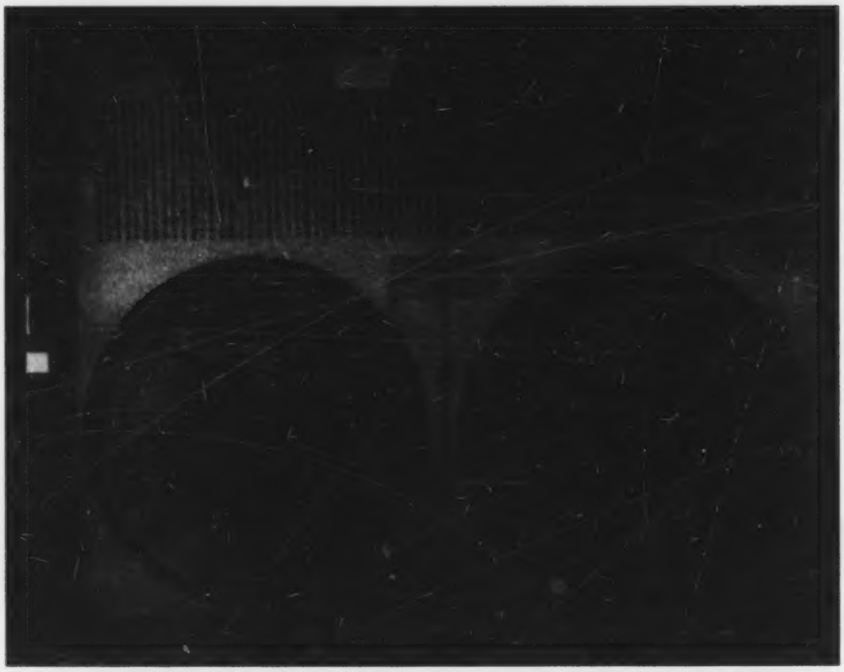
Grande
Mer
Ocean

Carte de France par Nicolas Sanson (1)

Celticus
Occidentalis
Oceanus
Mare Externus

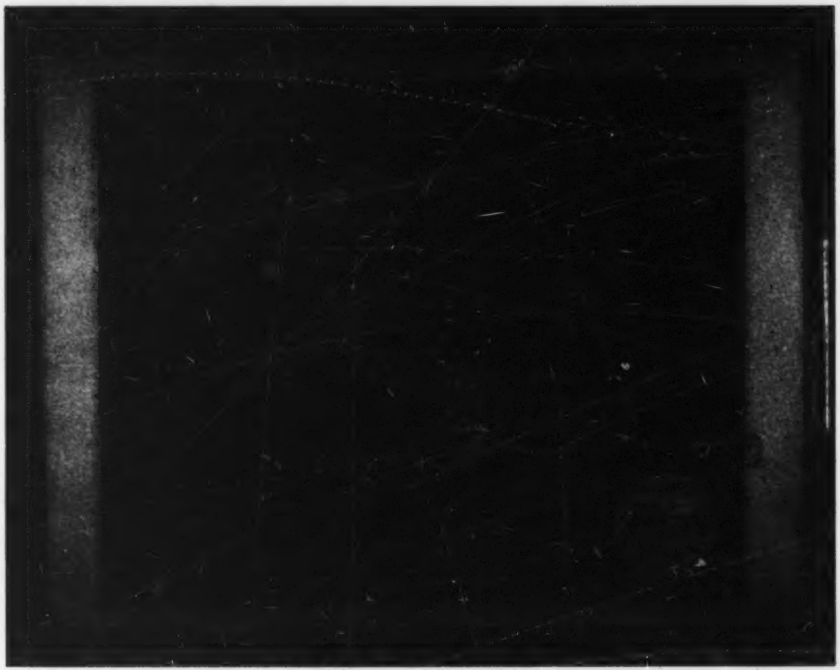
Carte de France par Bouquet (1738)

Carte de France



Mappemonde chinoise (1489)

BEST COPY AVAILABLE



Amérique par Mercator (1)

Nouvelle France (1)

Globe vert

Globe doré

67th IFLA Council and General Conference
August 16-25, 2001

Code Number: 146-101(WS)-F
Division Number: V
Professional Group: Acquisition and Collection Development **Workshop**
Joint Meeting with: -
Meeting Number: 101
Simultaneous Interpretation: -

Les échanges internationaux de publications : Pourquoi et comment ? Quelles perspectives d'avenir ?*

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Les échanges internationaux ont retenu l'attention de l'IFLA dès avant la seconde guerre mondiale. Ils ont été codifiés sous forme de manuel par l'UNESCO en 1950. L'objectif était d'aider à la reconstitution et au développement des bibliothèques après les destructions dues au conflit mondial et de revivifier les réseaux d'échanges culturels.

Les principes essentiels des échanges ont été :

- la **gratuité** : les échanges sont d'emblée définis comme hors des circuits commerciaux
- la **réciprocité**
- la **diversité** des types de publications susceptibles d'être échangées (monographies et publications en séries, publications de sociétés savantes, thèses, publications officielles, reproductions de manuscrits, de documents épuisés, rares ou précieux) et des supports (papier, microformes).

Les échanges ont été conçus comme **complémentaires** des principaux modes d'entrée de publications dans les bibliothèques que sont l'achat, le dépôt légal et le don. Ils peuvent constituer une source principale d'acquisition de documents publiés à l'étranger lorsque ces derniers sont trop coûteux pour être achetés ou quand ils ne peuvent être repérés et acquis aisément et rapidement via un libraire ou un diffuseur.

Les échanges se font **de bibliothèque à bibliothèque**, ou sont **centralisés** par un service des échanges internationaux rattachés à un grand ministère (la culture, l'éducation, parfois les services du premier ministre), ou à la bibliothèque nationale ou une grande bibliothèque assurant les transactions d'échanges pour toutes ou pour plusieurs autres bibliothèques du pays.

Les échanges internationaux sont **alimentés** soit par un budget spécifique, soit par des exemplaires supplémentaires de dépôt légal, soit par des fonds de doubles ; dans certains cas, et notamment pour les thèses et les publications en série de certaines universités, des exemplaires en nombre sont réservés aux échanges internationaux , permettant ainsi d'alimenter la bibliothèque universitaire de publications étrangères reçues en contrepartie.

Les échanges peuvent être des attributions systématiques, par exemple de toute la production de niveau universitaire, ou des traductions des écrivains du pays avec lequel on échange ou de certains types de publications comme les thèses ; dans d'autres cas, les plus nombreux, les publications disponibles par échange sont choisies sur des listes de **propositions**, souvent thématiques, périodiquement diffusées auprès des partenaires d'échanges qui opèrent leur sélection sur ces listes et envoient à leur tour des propositions d'échange.

Quand peut-on dire qu'un échange de publications est un « bon » échange ? Quand il satisfait les deux parties. Des échanges performants sont des échanges qui enrichissent réciproquement les partenaires d'échange et leur permettent une substantielle **économie de moyens** en général (budget d'acquisition, frais d'envoi, de personnel, temps et espace) ; ce sont des échanges **réguliers** (notamment pour les publications en série) tout en étant **rapides** et **adaptables**. La caractéristique des échanges est en effet de tisser un réseau de communication dans un contexte mouvant, tributaire des fluctuations politiques, économiques, culturelles, nationales et internationales. L'organisation des échanges internationaux de publications doit concilier deux exigences contradictoires, la continuité et la souplesse d'adaptation.

La finalité et les modalités des échanges ont-elles fondamentalement changé en un demi siècle?

A première vue les **objectifs** des échanges internationaux sont toujours valables : il s'agit bien d'enrichir mutuellement les ressources documentaires des partenaires d'échanges au moindre coût, de nourrir et de développer les réseaux internationaux de communication culturelle.

Les **modalités** d'échanges sont cependant en train de se transformer rapidement au rythme où les nouvelles technologies révolutionnent les moyens d'information et de communication culturelles : **INTERNET** permet aujourd'hui instantanément de transmettre et de sélectionner des listes de propositions d'échange, de réclamer des publications non reçues, de répondre aux réclamations ; il permet aussi d'ores et déjà, même si cela est peu pratiqué pour l'instant, d'échanger des publications sans support matériel, sans limite de distance, de nombre de destinataires ou de volume de publication ; il peut rendre caduc l'intérêt d'une gestion centralisée des échanges.

Ses avantages pour la gestion des échanges sont sans commune mesure avec le gain qu'ont représenté en leur temps la généralisation de l'usage de la télécopie et la substitution de microformes au support papier. Mais n'y a-t-il que des avantages dans le développement des nouvelles technologies au service des échanges ? On peut se demander si, à plus ou moins court terme, cette révolution dans les moyens des échanges internationaux ne pourrait pas aboutir à une remise en question de leur existence : pourquoi échanger en effet quand on peut consulter à distance ? Le déclin voire la disparition des échanges internationaux de publications traditionnels au profit des réseaux virtuels de communication internationale est-il à prévoir ? sera-t-il un handicap pour les bibliothèques des pays qui en ont fait leur principale source d'enrichissement documentaire en publications étrangères ? ou leur insufflera-t-il une nouvelle dynamique en leur permettant une communication plus rapide et moins coûteuse avec leurs partenaires d'échange ? Où en sommes nous aujourd'hui et quelles sont les perspectives d'avenir des échanges ?

(*) Cette présentation sera suivie d'un rapport bref sur les échanges de la Bibliothèque nationale de France

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The international book exchange in Russian libraries: yesterday, today and tomorrow

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The report analyses the history and the development of the international book exchange in Russia, its role in the process of book acquisition and collection development in the near future.

Library holdings are enriched in all countries by purchase of literature, international book exchange and by gifts.

The purchase of literature is always the main and the most effective source of acquisition. Gifts are an additional and auxiliary source, but no one can plan or predict the results of this kind of acquisition. The percentage of gifts as a part of all library holdings could vary from library to library. International book exchange is being paid serious attention in Russia. This can be explained by a brief analysis of the history of various ways for the formation of libraries' holdings in the Soviet Union. In the 1950s the Soviet government published a number of enactments directed to create a centralized system of information in technical sciences, which included science libraries and centers of technical and scientific information. Import of literature from abroad was strictly regulated by these enactments and was controlled by a special subdivision of the Committee for Science and Technology. In accordance with established order in the USSR there were 1900 libraries collecting foreign literature. The allocation of foreign currency for the purchase of foreign literature was centrally distributed and lists of titles were strictly controlled and subject to approval. The country tried to get as much foreign literature as possible with a low rate of duplicates. This was considered as informative independence. International book exchange was also strictly regulated. According to the last enactment of the Soviet Council of Ministers in 1977 50 organizations had the right to exchange literature. As a result of such practice in 1991 Soviet libraries for example got the following number of foreign magazines:

The number of titles			The number of sets		
Order by purchase	Exchange	Total	Order by purchase	Exchange	Total
10296	9573	15908	36151	21146	57297

It is evident that the number of publications received through international book exchange was impressive. For example in the case of the Russian National Public Library for Science and Technology this rate was 40 % and in some other libraries it was more than 50 %.

The data of 1991 were taken as an example, because this was the last year of stable and obligatory financing of libraries and central regulation of the book acquisition at libraries and for the whole information space in Russia.

During recent years Russian libraries were put on "hungry diet". The system of coordination was destroyed and at present there is no comprehensive information about the real situation of library holdings. We only know that the amount of foreign exchanges with libraries has decreased drastically and that the conditions of their holdings have deteriorated. Therefore, in the last decade international book exchange became of particular importance for us.

As a consequence of the financial constraints the exchange is almost the only source of foreign literature acquisition for many libraries. For a number of them this source is absolutely new and is inadequately pursued because earlier they had no possibility to exchange literature with foreign countries. They have to solve many problems: how to find a partner abroad, how to get the literature to be offered for exchange and to know about the optimal way to send it to partners. In recent years the libraries, which had a tradition in exchanging literature with foreign partners, changed their approach, increasing its efficiency and usefulness. Now practically there are no political constraints, which were important before. The libraries at universities, scientific institutions exchange their own publications, i.e. scientific proceedings, methodological handbooks, guides, monographs, etc. It is reasonable and not expensive for the library to send these non-commercial publications. It should been taken into consideration that the above-mentioned publications are rare and the subjects described cover significant aspects of the scientific and cultural life, therefore they are highly appreciated and demanded by exchange partners abroad. Such literature is published a very limited circulation. Even to obtain information about the availability of these publications seems to be a problem. In many cases the only chance to acquire such publications is to get them through international book exchange. Hence, the exchange is of benefit to both sides.

The main principle of international book exchange is a voluntary agreement of exchange on mutually advantageous terms. Benefits resulting from these terms depend on the situation of the partners and reflect their special needs. During many years international book exchange was mainly accomplished according to the "edition for edition" principle. But at present we also take into consideration the informative value of the items proposed for exchange. This means that an exchange is accomplished on an equivalent pricing basis. It has to be pointed out that the calculation of the balance of value is often rather difficult. In some cases the book dealers export catalogues could help to be informed about the Russian literature distributed by these companies.

At present many exchange partners are suffering financial problems. The reason of this lies in the decrease of the budgets for exchange at libraries both in Russia and other countries. The loss of interest at partners in developed countries to conduct an exchange could partly be explained by the difficulties involved, such as lots of paperwork, extra counting, etc. Besides, there exists a certain reluctance to continue or start exchange relationships in an atmosphere of political and economic unstability, because there is an uncertainty of how expensive and reliable the exchange is or will be. On the other hand the well-developed cooperational contacts based on many years of trustworthy relationship give the partners the confidence that he could rely on the delivery-receipt of the other party's current publications as well as on their publications of low circulation. For example, since the Russian National Public Library for Science and Technology has been founded the Library of Congress (USA), the British Library (UK), the American Chemical Society (USA), the Japan Physical Society (Japan), the National Library of France and some other institutions are among our exchange partners.

I would like to present some figures connected with our international book exchange. This Library has received from this source 1200 titles of foreign journals and approximately the same amount of serials and materials of conferences. Without exchange of literature we would not have been able to receive any material of a lot of scientific conferences because they are not being sold.

In the last decade we noticed a substantial growth of the ratio of editions obtained by exchange compared to the total number of editions acquired from abroad.

1991	27 %
1995	51 %
1999	76 %
2000	59 %

But this was the result of a reduction of the total number. The absolute number of editions received from the book exchange decreased.

1991	26405
1995	17996
1999	13444
2000	10225

The number of partners also became smaller.

1991	2096
1995	1580
1999	923
2000	852

It has to be pointed out that the more expensive editions could not be acquired through international book exchange. The specialists of the Russian National Public Library for Science and Technology studied the demand of readers and have collected a list of some 2000 most important foreign journals. At present we get only 700 of them and 400 are resulting from the book exchange agreements. Another 650 journals are also important because some subject areas only can be covered by editions we get from international book exchange.

It seems that the publication of journals in electronic forms and electronic access to the literature are diminishing the importance of book exchange because the electronic media considerably facilitate the access to the literature. At present libraries do not try to get as much of the literature as possible. Printed editions have been partly replaced by electronic editions. Hence currently the need for book exchange is going down, because traditionally only printed editions had been exchanged. Nevertheless in our practice there were cases when electronic accesses were offered in exchange of printed materials. Libraries are trying also to get a printed edition and an electronic access to it. However it should be noted that access to electronic versions is still does not have much impact on the book exchange at Russian libraries. Leading libraries in Russia have become members of the consortium formed by Russian Foundation of Basic Research which offers a privileged access to electronic journals of leading foreign publishers: Elsevier, Springer, Kluwer, Academic Press and so on. These editions can rarely be obtained in the process of book exchange. Currently only 18 Russian libraries enjoy access to these journals.

Libraries with a good technical background may be interested in the project of the Open Society Institute (Soros Foundation) and the company EBSCO providing the electronic access to 3400 journals mainly in social sciences, offered by the data base of EBSCO. The cost of the annual access to this database is from 500 to 8000 dollars for various libraries. But in fact this project doesn't influence the exchange programs considerably. I think (and this was confirmed to me by my consultation of specialists at leading libraries) that the interest of Russian libraries in international book exchange will remain high in the near future. Our foreign colleagues also will not give up the exchange activities entirely. It can be observed that the growth of electronic publications, the qualitative leap in the technical condition of libraries, the new computer programs have their influence on the book acquisition in general and the international book exchange in particular. Present possibilities of an exchange of information make it possible to give up the principle of comprehensiveness for foreign book acquisition and to rely on electronic publications having appropriate web access. But, first of all not all publications are provided in electronic version. Secondly, it is hard to imagine the British Library or the Library of Congress without unique book and journals collections. Each library wants to keep and increase its cultural and national values. At present only printed editions are being exchanged, but it is quite obvious that also the exchange of electronic versions will be developed in the future. In Russia electronic versions are less popular than abroad, but their number will inevitably increase. Even now our libraries have their own products offering electronic information that could be the subject of further exchange. For example Russian National Public Library for Science and Technology has thematic bibliographical databases which include:

- Russian Union Catalog of Sci-Tech Literature
- a ecological database;
- a databases of Russian periodicals, of grey literature ,
- a database of Russian scientific organizations.

As a conclusion I want to present some statements which are quite common for libraries involved in international book exchange.

- International book exchange is an important source of enrichment of libraries holdings. It is the only source of book aquisition for certain libraries.
- All specialists are aware of the tendency of a decrease in book exchanges. But simultaneously they consider it not necessary to aim at an artificial preservation or increase the number of partners of this exchange.
- International book exchange will be most efficient only if libraries make a strict choice of editions and will acquire the most important editions only.

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International book exchange: has it any future in the electronic age?

(A view from the Russian National Library, St. Petersburg)

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Some History

As concerns The Russian National Library, the book exchange began in the late 1950-ies in the context of liberalization of the political regime undertaken by Nikita Khrushchev. Before that time, the single library granted such a privilege was The Lenin State Library of Moscow, currently The Russian State Library, which shares today status of a national library only with The Russian National Library of St. Petersburg. The rapid growth of the exchange reaches its peak in the '60-70s. The exchange became most important source and at times became even the single avenue for acquisition of foreign books as the state funds were designated to subscription of scientific periodicals (mostly medicine and engineering). During the '80s, the volume of exchange began to slide down, with its low point in the early '90s, however the significance of this source of foreign book acquisition has been very high and growing again. Between 1991 and 1994, it was the only way to acquire foreign books.

Although the financing has lately improved, the significance of the exchange is invaluable. It gives us, in the recent years, around 30 000 items of periodicals, 7 000 books, let alone newspapers, posters, and so forth coming from 1 150 partners in 77 countries.

Positive Aspects

The international book exchange viewed from The Russian National Library (and perhaps from the broader Russian perspective) looks like an affordable and effective source of acquisition. Current Russian budgetary difficulties and small portion of the budget allotted to cultural institutions augment the benefits of exchange in comparison with purchase. Even discounts that book traders give to the libraries do not bridge the price gap: Russian books that we exchange are a lot less expensive, that is, through exchange, we are buying foreign books by Russian prices. Even the growing postal tariffs in Russia, which are approaching international ones, still have not erased the value of book exchange.

As a result of sociopolitical changes, present Russian book market is so rich and divers as never before. The Russian reader has never had access to such a variety of books, many of them belong to the category proscribed before the end of Φ80s. These are in the first place books in social sciences, history, belles-lettres and so forth.
The editions are numerous but small, printed by little, often short-lived companies and are difficult to obtain except by book exchange.

Internal Threats

The most obvious difficulty we face today is low budgeting of Russian libraries. While we don't know how long will last this trend, we are well aware of the imminent threat of ever growing prices of periodicals and books in Russia.. So far, the prices are not nearly that high as the average ones on the global scale. Their grows is held down by the low purchasing power of population. Yet the tendency is too clear to be ignored.

An exacerbating factor is the state of tax laws that threaten the book acquisition including the exchange. According to the tax bill that is currently under discussion in the Duma, Russian libraries would pay added-value taxes on foreign editions including those acquired through the book exchange effective already 2001.

An additional burden is imposed on the libraries by exceptionally time-consuming customs procedures. Smaller libraries simply cannot handle them and have to pay top money to agents or are forced to abandon book exchange altogether.

The most troubling problem that looms large on the horizon is associated with the problem of human resources which greatly differentiates the situation Russian libraries are in from that of the Western. The first problem in this regard is growing shortage of qualified specialists. From the outset of the business of book exchange, the service engaged highly qualified specialists, mainly Leningrad university graduates in philology and history who had command of several foreign languages, were intimately familiar with fine literature, were experienced in work with bibliographical sources, very often themselves were first and very much involved readers of the books which they acquired for the library. The situation drastically begins to change in the early '90s. The sociopolitical changes Russia underwent effected dramatic change of values and professional orientation among young people. These days young university graduates have opportunities not available in the '50s and '70s. A lot more lucrative jobs than those in the libraries have opened before them. At the same time, the salaries of librarians have dropped so low that they are today awfully inadequate. Educated people cannot any longer afford themselves interesting jobs.

Today, The Russian National Library employs 20 librarians in the division of foreign book exchange. Such a team seems to be a luxury by the Western standards, but in fact we cannot any longer sustain a high quality of the staff. Many of those who are well qualified for the job with foreign exchange and acquisition have already reached the retirement age, and there is no replacement for them from the pool of sufficiently educated people. This is a threatening situation with no solution in view.

Outer Threats

Manifestations of the outer threats have been there for quite some time. The first one has been noticed already in the Φ80s: dwindling down of the interest for the Russian book has been registered in many countries. Our main partners in the book exchange are today mainly large university libraries in the West which keep maintaining of Slavic collections high on their list of priorities. The number of such libraries is limited, and their orders have significantly diminished in comparison with the '60s-'80s.

If in the '60s, practically, there were no other sources for the purchase of Soviet books than The Interbook (Mezhkniga), a monopolistic state agency, today, there is a rather large net of competing book-selling companies that penetrated Western markets. As a good example, I can mention the publishing company Dmitry Bulanin of St. Petersburg which has established well working connections with various libraries and booksellers in Europe and America. The activities of such companies still are spotty and uneven in various countries, but their presence becomes steadier, and their mutual competitiveness brings down prices of Russian books in the West. This tendency is visible quite well in Germany. We have no data, but it would be safe to assume that similar processes are under way in the US.

Clearly, the situation of the Western libraries is different and is ridden with different but nonetheless severe problems. The book exchange business requires knowledge, analytical skills and is labor intensive. It needs a work force with very special qualifications. It requires a team work, and the teams cannot be too small, too. As much as we know, under the present time budgetary limitations, our partners are insufficiently staffed. And having no capacity for checking out carefully the lists of supply against the demands of their respective institutions, they are forced to reduce their book exchange (we suppose, one can argue that this leads to stricter criteria and more focused selection). When the books exchange cannot be handle properly, purchase of books becomes the alternative of necessity.

As we have learned from the representatives of Western book-selling companies, the above mentioned tendency compels libraries in the West to devise new strategies. Increasingly often, European and American libraries commission the booksellers not only to buy books for them, but also to do selections in accordance with criteria spelled in cumbersome itemized forms. Such services are expensive, but employment of teams of qualified specialists in various fields is even more expensive.

Finally, new possibilities opened by the cyber age are not to be missed. The rapidly growing availability of electronic copies of documents housed in libraries makes physical accessibility of a book or a periodical unnecessary. Russian libraries have today electronic means at their disposal. Electronic copying concerns in the first place documents needed to narrow circles of scholars and scientists. Electronic copies serve this kind of readership well, especially as concerns papers from periodicals and parts of books.

Even before the arrival of amazing contemporary means of telecommunication, already in the '70s, our experience registered decrease of orders for periodicals from our exchange partners, because scientific and scholarly magazines became available through well coordinated channels. This tendency was especially clear as concerned publishers of magazines that conducted exchange with us. If in the '60s through mid '70s their part in the book exchange was significant -- we used to have many hundreds of such partners, -- today, their participation is very modest.

Means of the Electronic Age

It is hard to forecast today the possibilities which will open ten years from now. Even in the nearest future, we may expect surprises. What seems to be fantastic today will shortly appear in the field of telecommunication, electronic delivery of documents and technologies of making electronic copies. Currently, procedures of document scanning are time consuming, and their feasibility is limited to documents of relatively small size. There is no doubt that these technologies will become in the near future more productive and thus will take a larger share in the international book exchange.

The International Book Exchange: Traditionally Produced Documents and Their Electronic Copies

Then how can we envisaged the future of the international book exchange? Will it withstand the onrush of new technologies or is it bound to become a turned-over page in the history of foreign book acquisition? The overall tendencies are of dual nature: on the one hand, it is clear from the experience of the last decade that the book exchange is dwindling down; on the other hand, it becomes more focused and better fitted to the special needs of partners. We would like to underscore that notwithstanding all the progress in electronic technologies and proliferation of new modes of delivery, libraries still overwhelmingly prefer obtaining traditional paper copies (!) of books and periodicals. We may venture a prediction that the book in its traditional form would acquire in the future even greater value in the eyes of erudite researchers and book lovers in comparison with our own time. A book carries not just information embedded in the text and illustrations, but also a multitude of imprints and testimonies of its age which become more eloquent with the passage of time and usually are not very discenable in its own time. These testimonies will be largely erased by the electronic means of copying no matter how perfect they could become and not carried over in full to the users of future. Yet these testimonies are part of cultural legacy. No doubt, electronically made copies will become a routine component of the book exchange. The proportion of it will stay in direct association with the profile of a library as well as with the availability of funds. The more unique a library is the more capable it will be to supply its partners with the copies of documents and to exchange them for other documents in any form -- traditional or digital. Of course, the international community of librarians will have to solve numerous problems concerning the copyright and licensing. The exchange of editions published in small numbers or those distributed outside of the commercial nets will have its adherers under any circumstances.

A Final Remark

We would like to point out one particular feature of organization of the book exchange in The Russian National Library. From the very beginning, this field attracted specialists of high qualification who, besides the routine library work (conducting correspondence with partners, keeping an inventory of exchange, and so on), were commissioned to monitor the publication scene in every particular field of scholarship that corresponded to the field of their initial specialization acquired at university. This mainly concerned literary scholarship and linguistics, while engineering and medicine were in the hands of specialized bibliographers. This way, the international book exchange stimulated formation of a group of specialists capable of solving various problems associated with compiling collections of foreign books in various fields at the level suitable to a national library. Such conditions have allowed us effectively to conduct the international book exchange as well as other forms of international activities.

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USA – Russia Library Materials Exchanges: Past, Present and Future

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INTRODUCTION

Research materials exchanges between US and Russian libraries have a long, productive and mutually beneficial history. Throughout their existence these exchanges have been affected by political situations, economic conditions and developments in science and technology. This paper attempts to give a brief overview of the history of exchanges, assess current conditions, and make very subjective projections concerning future developments in exchange programs between US and Russian Libraries.

HISTORY

It is somewhat difficult for someone not involved in building Slavic Collections in the West to understand current conditions without some knowledge of the history of exchanges. Thus we will make a brief journey into the past.

Exchanges of research materials between American and Russian libraries played an important role in cultural relations between the two countries. This role became even more significant after the Russian Revolution of 1917, when the Soviet Government began to use exchanges not only as a means of obtaining materials from the West during the turbulent post-revolutionary times, but also as channels for distribution of propaganda or, in its own words, "truthful" information about the Soviet Union. Exchanges were also part of an effort to break out of the isolation in which the new Soviet State found itself after World War I and the Revolution, and to win recognition from Western countries.

Soviet cultural missions operated in the United States long before formal diplomatic relations were established in 1932, and conducting book exchanges was one of their tasks. The Soviet government also used book exchanges as a convenient method of obtaining scientific and technical information as well as western publications and general information on the world communist movement without spending hard currency, a shortage of which the Soviets experienced as early as 1922.

The United States pioneered in promoting exchanges of research materials and government documents between the two nations. Some Ivy League colleges established exchanges of materials with Imperial Russia in the early 1800s. Harvard University, for example, started exchanges even before the American Civil War. In June of 1921 the University of Illinois Library sent a letter directly to Lenin proposing an exchange of Soviet government publications for University of Illinois publications.[1] This letter seems to have made him realize that here was a much-needed opportunity to obtain western scientific publications without spending hard currency or gold. A special terminology even made its appearance in Soviet professional library literature in the thirties – bezvaliutnoe snabzhenie bibliotek inostrannoi literaturoi,[2] literally, "non-hard-currency provision of libraries with foreign literature"- meaning, foreign materials libraries could obtain without paying hard currency.

Control over sources of information, however, was so important to the Bolsheviks that nine short months after the Revolution, in the midst of a collapsed economy, poverty and war, a conference on the centralization of the library system and an introduction to the Swiss-American system was held in Moscow in July of 1918.[3] Among the topics discussed was the issue of book exchanges. Lenin himself sent out the invitations to the conference. They were rather an order than an invitation, and ended with the words: "Non-fulfilment of this instruction will entail grave revolutionary penalties." [4] On one hand the Soviet government promoted the exchange of literature; on the other it established rigid control over book exchanges that continued during the entire Soviet period with various levels of severity.

Before the beginning of the nineteen sixties there were relatively few Slavic collections in the United States. The launching of the man-made satellite Sputnik into space by the Soviets in October of 1957, changes in the political situation after Stalin's death and the 20th Communist Party Congress prompted ample public interest in the United States and instigated a mini-explosion in Soviet studies. New Russian and Soviet study programs were established at many universities and the few already existing Slavic centers got a second wind. This is when the majority of American universities started to build their Slavic collections.

That was not an easy task. Strict censorship and control over production and distribution of information in the Soviet Union had a profound effect on the ability of American libraries to build their Slavic collections. Libraries outside of the Soviet borders could obtain materials published in the Soviet Union—and only those titles approved for distribution abroad—solely from a book export agency called Mezhkniga (International Book), or from western vendors who also had to buy publications from this same Soviet agency. Western libraries used exchanges for obtaining Soviet materials not available through government-controlled channels.

The exchanges were mutually beneficial for American and Soviet libraries. Ironically censorship and draconian control over the production of printed matter had its positive side. The Soviets had probably the most comprehensive bibliographies in the world, produced by the Soviet Book Chamber, the national centre for bibliographic control. Thus Western librarians knew what was published in the Soviet Union, ordered the materials they wanted from vendors, and what they could not get from dealers, they requested from exchange partners.

During the Soviet period many Soviet libraries received several copies of newly published titles free of charge. A portion of these deposits was used for international book exchanges. Therefore Soviet libraries did not have to have special allocations for acquisitions of materials for exchange partners or hard currency for building collections of foreign publications.

STATE OF EXCHANGES DURING THE SOVIET PERIOD

Slavic exchanges were discussed in depth at ***The Second International Conference of Slavic Librarians and Information Specialists*** held in Washington DC in 1985. In preparation for today's session, I reread papers published in the conference proceedings devoted to exchanges. I was struck by the vitality of the exchange programs at various universities and by the enthusiasm of American librarians regarding their relations with Soviet libraries. Back then I conducted an assessment of exchanges for that conference. In 1984 a questionnaire was distributed to sixty Slavic collections in the United States. Thirty-four libraries representing 56.6% had responded. The following motives were listed as reasons for establishing exchanges:

Obtaining of materials not commercially available, such as:
- Local / provincial / regional publications
- Small run publications
- Limited editions
- Conference proceedings
- Government and other official publications
- Materials not intended for distribution in the West

Microfilming services
- Of antiquarian materials
- Back issues of out-of-print serials
- Long runs of antiquarian serials

Receiving serials / periodicals in the original
- Out-of-print serials
- Back runs of serials
- Current serials

Saving money
- Exchanges were viewed by some as a less expensive way of obtaining Soviet publications, antiquarian books and serials

Bibliographic services provided by the Soviet Libraries
Cultural exchanges – library and scholarly contacts.

In 1984 64% of US libraries with Slavic collections had exchange programs with Russian libraries. A quarter of these libraries received between 10 and 35% of their total current monographic acquisitions from exchange partners in the USSR; one-fifth of the libraries received between 40 and 50 percent; one-sixth – 1 to 5 percent and one library acquired 100% of current monographs from exchange partners. The majority of the libraries reported a high level of satisfaction with this method of acquisitions.

Percentage of the Total Monographs Received by US Libraries through Exchanges in 1984

% of US Libraries	% of Total Acquisitions
25%	10% - 35%
20%	40%-50%
17%	1%-5%
2%	100%
36%	None

More than half (65%) of the US libraries obtained current Soviet serials through exchanges. The extent of obtaining current serials acquisitions through exchanges among these libraries varied greatly, ranging from 5 to 80%. The satisfaction level was also high.

Percentage of the Total Serials Received by US Libraries through Exchanges in 1984

% of US Libraries	% of Total Acquisitions
65%	5%-80%
35%	None

CURRENT STATE OF EXCHANGES

Sixteen years later, in 2001, a slightly modified questionnaire was distributed to a much wider group of Slavic librarians. A considerably smaller number of libraries responded – 7 American and 2 British. In addition some librarians sent only short summaries regarding their declining or discontinued exchange activities. According to the 2001 survey results the following picture emerged.

Percentage of the Total of Publications Received from Exchange Partners

Slavic collections at:	1984	2001
Stanford	Most of titles	20%-30%
Cornell	100%	Only some
Harvard	32%-35%	None

BEST COPY AVAILABLE

- The general tendency is toward curtailing the exchange programs in the United States.
- It seems the exchanges have survived and are still productive primarily at large libraries with a staff of Exchange Librarians or where Gifts and Exchanges departments handle them.
- The majority of the largest and most comprehensive US Slavic collections have scaled down exchange programs. For example, both Cornell and Stanford reported a reversal in the proportion of materials acquired from vendors and exchange partners. Stanford used to receive most of its Slavic materials from exchange partners; now they get only 20% to 30%. In 1984 Cornell's main source of Russian and East European acquisitions was exchanges; Western dealers were used only as a supplementary source.[5] In 2001 the reverse is true: the primary sources of acquisitions are approval plans and blanket orders with western vendors, while small- scale exchanges serve as a supplementary source.
- Some of the largest Slavic collections have discontinued exchanges. Harvard, for example, reported in 1984 getting 35% of monographs and 32% of serial titles through exchanges.[6] Presently Harvard has no exchange programs.
- A few libraries receive about half of their materials from vendors and the other half from exchange partners.
- Only one library reported a slight increase in exchange activity.[7]

REASONS FOR DECLINE

No doubt, the exchange programs are in a considerable decline. The question is, why?

- Ironically, the vanishing of censorship and government control caused the initial decline. Exchanges ceased to be the only source for obtaining materials not available through Soviet export agencies.
- In effect, exchange partners became simply vendors and as such had to compete in a free market economy with professional vendors while suffering great disadvantages.
- The number of free books received by Russian libraries in the Soviet era has either decreased considerably under present conditions or become unavailable, for various reasons. Therefore Russian libraries could offer noticeably fewer titles for exchange and had to purchase materials in order to satisfy their exchange partners' requests.
- However, as a result of negligent funding, in many instances Russian libraries did not have money available even for building their own collections with Russian publications. Lack of funds for purchasing and shipping materials has been the most crippling disadvantage for Russian libraries.
- In addition, the Russian government has failed to support international exchanges. Instead of creating favourable conditions for enhancing or building foreign materials collections, the new Russian government from the beginning has issued legislation that continues to create great obstacles for exchanges.
- In short, Russian libraries did not have enough means, flexibility and experience to obtain materials in the new environment following the downfall of the Soviet Union that resulted, among other things, in loss of bibliographic control and the demise of the Soviet publishing and distribution systems.
- Currently both Russian independent and western vendors can obtain Russian publications from virtually anywhere in Russia in a more organized and efficient way, and deliver them faster to US libraries.
- Finally, there is a cost issue. Although the exchanges are a form of barter, the overwhelming majority of libraries assigns a monetary value to exchange materials for the sake of keeping balances. However, in many instances exchange partners price their

offerings either just slightly below or even higher than vendors without providing the same level of service. One of my colleagues nicely summarized the situation as: "Cost being equal, it is easier to work with a vendor."

IMPACT OF ELECTRONIC MATERIALS ON EXCHANGES

The impact of electronic materials on our collections and exchanges is a vast subject and deserves separate study. For this reason it will not be discussed in depth in this paper. However, in my opinion electronic materials eventually will make exchanges obsolete. I envision libraries of the future as providers of remote access to databases and gateways of information.

- Libraries purchase the right to access information for the members of their institutions.
- Access is so expensive that most likely no American institutions will ever be able to pay for their exchange partners.
- When and if Russian libraries create databases and charge for access, it would be easier for American libraries to purchase access rather than barter it.
- The databases created by libraries and other institutions with grant money typically are available on the Internet free of charge.
- Unless electronic information is on CD-ROMs - that is, in one physical unit – it is impossible to exchange it. This format, however, has so many limitations that it does not have much of a future.
- Databases of Russian central and regional newspapers and social sciences journals produced by a commercial vendor and purchased by many American libraries are a good illustration of the point made in this paper. It is less expensive to receive these materials in electronic format; there are no shipping costs and no missing issues, plus global searching is available across the entire database. Moreover, newspapers are available a day ahead because of the time difference, as opposed to several days later by mail in the best-case scenario. Therefore there is no need to subscribe to these titles in paper format from exchange partners or vendors.
- Most likely electronic materials will gradually cause exchanges to deteriorate, but their impact will not be significant for many years to come.

CONCLUSIONS – THE VIEW FROM THE WEST

- Although somewhat reduced in scale and number, exchange programs are not dead by any means.
- Many libraries still view exchanges as a valuable source for obtaining regional publications and out-of- print books and serials in paper or microform format.
- Exchanges are viewed by some as an important source for receiving or verifying bibliographic information and a way of maintaining professional contacts with Russian and East European counterparts.
- Large libraries with staff allocated to exchanges will probably continue exchange programs.
- Smaller collections with less staff are forced to optimise their resources and find the most efficient and least expensive ways of obtaining Russian publications.
- If Russian exchange partners provide more efficient services and charge less, exchanges will survive and flourish; if not, they will loose the competition to vendors.

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[1] Lenin and Library Organization . Moscow: Progress, 1983. p. 80, 81.
[2] Vugman, I.S. "O mezhdunarodnom knigoobmene u nas I v kapitalisticheskikh stranakh," *Sovetskaia bibliografiia* vyp.2, p.92.
[3] Lenin and Library Organization, p. 101.
[4] Lenin and Library Organization. p.42
[5] Kann, Marilyn "Cornell University Libraries' Exchange Arrangements With the USSR and Eastern Europe" in Books, Libraries and Information in Slavic and East European Studies: Proceedings of the Second International Conference of Slavic Librarians and Information Specialists. Mariana Tax Choldin, ed. "Russica" Bibliography Series, #8. New York: Russica Publishers, 1986, p. 421
[6] Zilper, Nadia "Assessment of contemporary exchange programs between American and Soviet Libraries".in Books, Libraries and Information in Slavic and East European Studies p.454
[7] Lorkovic, Tatjana and Johnson, Eric A. "Serial and Book Exchanges with the Former Soviet Union" *Serials Librarian* Vol. 31(4) p. 86.

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Les Echanges de publications universitaires au Sénégal

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Les échanges de publications tels que nous les connaissons aujourd'hui, sont pour l'essentiel institués par la 10^{e} conférence générale de l'UNESCO du 3 décembre 1958. L'UNESCO avait alors adopté 2 conventions : la convention sur les échanges internationaux de publications entrée en vigueur le 23 novembre 1961 et la convention sur les échanges internationaux de publications officielles entrée en vigueur le 30 mai 1961. Notre propos portera seulement sur la convention sur les échanges internationaux de publications et plus particulièrement sur les publications universitaires. Un accord expresse est alors passé entre 2 institutions, chacune manifestant sa volonté de faire connaître à l'autre ses publications si elle les produit directement ou les publications de l'institution qu'elle sert si elle en est dépositaire, sans-contre partie matérielle.

On entend par publication universitaire toute publication à l'initiative ou paraissant sous les auspices d'universités (1). Deux grandes catégories de documents composent la publication universitaire en fonction de leur mode de financement :

- Ceux que les auteurs financent eux-mêmes, même si cela suppose la recherche de subventions par ces derniers : il s'agit des publications individuelles et collectives comme les livres d'auteurs (scientifiques au sens large ou pédagogiques), les actes de colloques, les journées d'études, les rencontres, les bulletins, les journaux des sociétés à caractères scientifique et généralement animées par des universitaires, des thèses et mémoires.

- Ceux pour lesquels les budgets universitaires ont ouvert une ligne de crédits que sont : les journaux d'informations générales et spécifiques sur la vie de l'université et divers documents administratifs qui ne retiendront pas notre attention, les publications qu'on pourrait qualifier « d'officiels » des divers établissements universitaires comme les annales, les bulletins des différents établissements universitaires et présentant les travaux des enseignants - chercheurs ; ces publications « officielles » peuvent également accueillir des travaux venus d'horizons divers même extérieurs à l'université et au pays mais ayant un caractère scientifique ou savant.

Ces deux catégories de documents seront étudiées sous l'angle des échanges et des dons comme actes de politique documentaire. Nous parlerons exceptionnellement des dons parce que comme nous le verrons plus loin, les échanges avec nos homologues deviennent de plus en plus difficiles à cause de la diminution de nos publications, de la décroissance des budgets, ce qui fait que les dons occupent une part importante de nos collections. Pour échanger ou donner une publication, il faut d'abord la produire et la valoriser. C'est pourquoi, la 1ère partie de notre exposé portera sur la dure réalité de la production et de la valorisation des publications de notre université dans un pays sous-développé comme le Sénégal. Ensuite, en tant que mode d'accroissement ou de développement des collections, nous parlerons de l'expérience de la Bibliothèque Centrale et de l'Institut Fondamentale d'Afrique Noire Cheikh Anta Diop de l'Université Cheikh Anta Diop de Dakar avec quelques chiffres à l'appui. Enfin, la deuxième révolution de l'écrit après l'imprimerie de Gutemberg, je veux citer l'édition électronique qui a bouleversé l'ensemble de la chaîne de l'écrit, nous impose de reconsidérer nos missions et nos pratiques. La troisième partie traitera donc des échanges et dons dans une nécessaire adaptation au nouvel environnement électronique.

I – La situation et la valorisation des publications universitaires au Sénégal.

Dans les missions qui sont assignées aux universités, l'enseignement et la recherche occupent une place de choix. Mission d'enseignement et de formation des ressources humaines dont une société a besoin pour se développer, mission de recherche pour contribuer à l'avancement et au développement des connaissances. Ces deux activités ne peuvent se développer si leurs résultats ne font pas l'objet de transfert sous forme de publications. En définitive, il n'y a pas d'activités scientifiques sans activités de valorisation, de mise en forme des résultats de la recherche.

I – 1 – La Situation des publications universitaires

L'édition africaine va mal. Dans le Tiers-Monde, c'est l'Afrique qui alloue le moins de ressources humaines et financières à la recherche. Considérée comme non rentable immédiatement, et donc comme non prioritaire, la diffusion des résultats de la recherche ne peut faire l'objet d'une attention particulière de la part de nos Etats. Avant d'entrer dans le vif de cette partie, nous voudrions d'abord illustrer notre propos par cette réflexion de R. AUBRAC (2) qui a montré la situation paradoxale de l'information scientifique et technique dans les pays en voie de développement. Ces pays pauvres ne gaspillent pas leurs biens tels que nourriture, vêtements, produits de l'agriculture ou de l'artisanat. Par contre, la connaissance scientifique et technique de leurs réalités, et de leurs potentialités se perd souvent aussitôt acquise. Alors que les pays développés font des efforts pour produire et faire circuler l'information scientifique et technique, dans les pays pauvres, cette information, si elle existe, est rarement accessible.
« Les riches gaspillent les biens et conservent le savoir. Les pauvres économisent tout, sauf ce qui leur permettrait peut-être de sortir de leur pauvreté » souligne – t – il en faisant remarquer que ce savoir est le plus souvent non public : c'est ce que dit bien le professeur Jacques Mariel Nzouankeu (3) quand il impute la non publication des travaux scientifiques au seul manque de moyens de nos universités.
Depuis 30 ans, de nombreuses rencontres ont eu lieu autour du thème des publications savantes et universitaires en Afrique et des recommandations fortes et justes ont été faites à chaque fois que ce soit autour de la production, de la diffusion, des bibliothèques, des librairies universitaires, ce qui retient l'attention, c'est l'éternel retour des mêmes recommandations. Ce qui signifie clairement qu'elles ne sont pas appliquées.

En effet, la situation de la publication scientifique en Afrique ne s'est guère améliorée au contraire, elle a même régressée. A l'Université Cheikh Anta Diop, cette tendance se confirme en dehors des thèses et mémoires qui connaissent une progression.
Les chiffres du tableau suivant sont tirés de l'annuaire de l'université de 1972 et d'une enquête au sein de l'université.

	1940	**1973-1992**	**1993-2000**
Publications Périodiques	21 titres tous à jour au31 décembre 1972	22 titres recensés dont 9 connaissent un retard de parution d'en moyenne 5 ans. Donc 13 courant	10 titres dont 6 courants, et règulièrement reçus à la B.U ; 4 devenus très irréguliers.
Monographies (titres parus dans les collections)	280	33	32

I – La Valorisation des publications universitaires

Les bibliothèques ont pour mission principale de collecter les publications produites par la communauté qu'elles servent de même que toute publication entrant dans le champ d'étude de cette communauté, de la conserver et de la diffuser. La Bibliothèque centrale est le dépositaire des publications universitaires, à ce titre, elle a la mission de les valoriser à travers la conservation et le signalement.

I –1 – La Conservation

Il s'agit ici de faire en sorte que les publications universitaires de même que la documentation acquise par l'université soient réservées sous une forme accessible aussi longtemps que possible. La bibliothèque centrale et l'IFAN disposent de locaux et d'équipements adaptés à cet effet.

I – 2 – Le Signalement

Beaucoup de travaux académiques sont produits mais échappent très souvent à l'Agence Bibliographique Nationale que l'Université doit relayer dans ce secteur. Il ressort de notre enquête qu'il y a beaucoup de difficultés à identifier les publications universitaires. Il y a une sorte de cloisonnement qui fait que l'on ne sait pas dans une faculté ce qui est produit dans une autre Faculté. Au sein même d'une structure donnée (laboratoire, département, Faculté ou institut), on ignore très souvent la production faite par les enseignants ou chercheurs. La plupart de ces derniers préfèrent se faire publier dans les grandes maisons d'édition du Nord pour les ouvrages et dans les grandes revues internationales qui paraissent dans les délais minimums pour les articles. Ce qui explique la désaffection vis-à-vis des publications locales plus lentes à paraître. A l'heure actuelle, en dehors des thèses et mémoires dont le dépôt est systématique, il n'est pas fait obligation aux enseignants et chercheurs de déposer des exemplaires de leurs publications. Le dépôt d'un certain nombre d'exemplaires doit être exigé pour permettre à la bibliothèque centrale de jouer son rôle dans le signalement et la diffusion des publications sur le plan national et international. Malgré ces difficultés, certaines initiatives ont été prises en vue de rendre plus visibles les publications universitaires. C'est ainsi que le réseaux des Institutions Documentaires, de l'Enseignement supérieur (RIDES) a réalisé un « catalogue collectif des mémoires soutenus devant l'université de Dakar et les écoles nationales supérieures du Sénégal, 1957 – 1981 ; un « catalogue collectif des thèses et mémoires et disponibles dans les institutions documentaires de l'enseignement supérieur » des origines à 1992 (avec plus de 3014). Dans les années 60, la bibliothèque centrale a fait régulièrement l'état des publications de l'Université sous forme de plaquette et a réalisé plusieurs catalogues.

La remarque qui s'impose est qu'il n'existe pas de catalogue des publications périodiques produites par l'université ; la raison en est que ces publications se comptent sur le bout des doigts.
Ces quelques remarques préliminaires liés à la production, aux retards de parution, à l'absence d'un acte réglementaire obligeant les enseignants et chercheurs à déposer quelques exemplaires de leurs publications à la bibliothèque sont à l'origine de l'absence d'une politique d'échange dynamique. Beaucoup de publications même « officielles » sont repérées que de manière fortuite et en dehors de l'IFAN/CAD, aucun établissement ne dispose d'un service de publication digne de ce nom.

II – Echanges et dons : actes de politique documentaire

Nous avons choisi de parler à la fois des dons et échanges pour 2 raisons. D'abord, parce que des dons mutuels, appréciés de part et d'autre peuvent aboutir à la formalisation de ces opérations par un accord expresse entre deux institutions. Ensuite, la rareté de notre monnaie d'échange que sont les publications de notre université nous a contraint à recevoir beaucoup de publications étrangères et à consentir une très faible contrepartie. Il n'est d'ailleurs pas tenu de comptabilité pour établir la balance des échanges qui est déjà très déséquilibrée. Les dons constituent une part importante des fonds de nos bibliothèques et viennent d'associations, d'ambassades, d'universités étrangères, de personnes privées… Ainsi, entre 1998 et avril 2001, 165 monographies ont été reçues comme échanges et 428 comme dons.
La bibliothèque limite son activité à des échanges directe, à l'exclusion des autres fonctions d'un centre d'échanges et les expéditions ne bénéficient d'aucune réduction des tarifs postaux, mais il n'est pas perçu de droit de douane .

II – 1 – Situation des échanges

L'IFAN/CAD pratique effectivement les échanges de monographies et de périodiques principalement avec la Bibliothèque nationale de France (BnF) et produit couramment 3 titres de périodiques.

Entre 1992 et 2000, l'IFAN/CAD a produit 19 MONOGRAPHIES et 62 titres de périodiques ont été reçus en échange de ses publications. La bibliothèque, le service audiovisuel et le service des publications forment le département de l'information scientifique. Vers 1989, il y a eu un ralentissement des publications qui avait occasionné un ralentissement des échanges. En 1998, avec la relance des publications, le département a mis sur pieds une politique d'échange assez dynamique dont la stratégie consistait d'abord à prendre contact avec les chercheurs pour évaluer leurs besoins ensuite, à établir la liste des institutions qui ont au moins envoyées une fois des documents et enfin à exploiter un ancien fichier d'échanges délaissé et qui comptait plus de 300 correspondants avec qui l'IFAN échangeait régulièrement des ouvrages. La stratégie vise aussi la maîtrise des publications et la création d'outils de publication comme une page web sur laquelle seront signalés les documents à échanger.

La bibliothèque centrale, avec plus de 250 correspondants à la fin des années 70, le nombre de nos partenaires pour les échanges est passé à une vingtaine.

La Bibliothèque n'envoie pas de monographies, mais en reçoit principalement de la part de la BnF et donne en contrepartie une des publications périodiques courante de l'Université dont elle est dépositaire. Il est assez fréquent de recevoir une correspondance accompagnée d'une liste d'ouvrages de la BnF par exemple nous proposant des ouvrages à échanger en nous demandant de renvoyer la liste après choix fait ou de confectionner une nouvelle liste des ouvrages choisis en reprenant les numéros respectifs de la liste reçue. Les termes de la correspondance spécifient souvent les domaines dans lesquels la BnF souhaite recevoir des ouvrages de notre part et le niveau. Nous sommes obligés de ne pas donner suite à cette offre n'ayant pas de monographies à offrir mais envoyons une de nos publications périodiques dès que possible.

Les échanges de thèses se pratiquaient mais ne le sont plus aujourd'hui à cause du manque de moyens financiers. Les thèses de médecine par exemple, initialement déposées en 115 exemplaires faisaient l'objet d'une large diffusion sur le plan international mais par manque de moyens, ce service là n'existe plus. De 115 exemplaires, le nombre de thèses déposées fut réduit à 65 exemplaires, puis à 30, ensuite à 15 pour finir à 8.

Aujourd'hui, seules les publications périodiques continuent à être échangées par la bibliothèque. Il faut dire aussi que le nombre de ces publications est devenue dérisoire car comme décrit dans le tableau d'en haut, de 21 titres tous à jour au 31 décembre 1972, 13 seulement étaient courants en 1992 pour ne tomber enfin qu'à 6 titres courants ; sans compter d'autres publications qui naissent sans être déposés de manière systématique à la bibliothèque. Seule monnaie d'échange, 3 de ces 6 titres courants nous servent à la fois pour l'échange de monographies et de périodiques.

II – 2 – Organisation et méthodes

Pour les monographies, un registre commun est ouvert à la fois pour les dons et les échanges. Le registre porte les mentions suivantes : un numéros d'entrée inventaire, la date d'entrée, l'auteur, le titre, le lieu et la date d'édition de l'ouvrage, la mention broché/relié, une zone d'observation. C'est dans cette dernière zone qu'on distingue tout ce qui est don et tout ce qui est échange. Pour chaque bibliothèque partenaire, une chemise est ouverte où sont conservées toutes les correspondances avec cette bibliothèque. Le titre de notre publication périodique donnée en échange ainsi que tous les numéros envoyés sont mis sur fiche et collés sur la chemise. Il en est de même pour les périodiques reçues. La correspondance peut prendre la forme d'une simple lettre, d'une lettre accompagnée d'un accusé de réception détachable, d'un simple bordereau d'envoie, d'un feuillet à plusieurs volets.

Il faut peut être envisager ici l'utilisation effective de formulaires ou fiches normalisés à cause du caractère international d'une telle activité. A la manière d'un format d'échange de données bibliographiques internationales, la normalisation de l'ensemble des pratiques doit permettre plus de rationalisation, plus de compréhension et de facilitation des opérations grâce à l'unité de langage. Pour le moment force est de reconnaître que chaque partenaire y va de ses propres méthodes qui sont aussi nombreuses qu'il y a de partenaires.

Ce tableau qu'on vient de brosser qui n'est pas très reluisant est lié à la pénurie chronique des publications de notre université et son corollaire sur les échanges d'une part et d'autre part, le contexte d'indigence généralisée des bibliothèques qu'elles soient du Nord comme du Sud. Cela autorise le professionnel que nous sommes à dégager quelques pistes pour renverser cette tendance.

II – 3 – Alternatives pour la production et une meilleure politique d'échange.

Le constat est que les dons sont substitués à une réelle politique d'échange et le danger est de recevoir des ouvrages qui n'ont aucune valeur pour une bibliothèque universitaire, ensuite, les exigences d'une politique de développement des collections, dans ses fonctions de planification et de sélection sont contradictoires avec des impératifs ou des hasards de dons. Dans un contexte de crise marquée par une diminution généralisée des budgets, l'accroissement du nombre d'utilisateurs et leur spécialisation, la masse documentaire disponible et en perpétuelle croissance, comment optimiser les échanges pour en faire un mode d'entrées efficace qui tienne compte des besoins de nos utilisateurs ? A notre avis, il n'y a pas d'autres alternatives sauf si ce n'est : de relancer les publications universitaires et de mettre sur pieds une réglementation au besoin dissuasive et contraignante rendant obligatoire le dépôt systématique d'un certain nombre d'exemplaires de toute publication d'un quelconque département de l'université.

La communauté universitaire dans son ensemble doit prendre conscience que notre université à défaut d'être rayée de la carte des centres d'excellences qui publient, occupe une place qui ne l'honore pas s'il est vrai que les activités de recherche menées à l'université ne se mesurent que par les publications réalisées. Faut-il le rappeler, les publications universitaires constituent l'indicateur privilégié, le baromètre de la productivité et du rayonnement de la recherche universitaire. Nous ne reviendrons pas sur la liste déjà longue sur les rencontres à ce sujet mais nous nous contenterons de donner quelques pistes qui, si elles sont explorées, peuvent constituer un début de solution.

- Les publications officielles (journaux, revues ...) des établissements universitaires jouent un rôle essentiel dans la carrière des enseignants et chercheurs et le rayonnement de l'université. Il faut alors accorder des avantages particuliers à ceux qui acceptent de publier dans les journaux locaux,
- Beaucoup d'actes de rencontres dorment dans les tiroirs en attendant un financement pour être publiés : les publier dans les revues locales sous forme de numéros à thèmes,
- Donner plus de moyens aux Presses Universitaires de Dakar,
- Accorder des subventions aux enseignant et chercheurs qui souhaitent se faire publier en dehors de l'université et leur fixer un certain nombre d'exemplaires à déposer impérativement à la bibliothèque,
- Le secteur des thèses doit être exploré car étant le seul secteur en croissance. Le Ministère de l'Education Nationale accorde des subventions aux thésards. L'université doit à son tour accorder une subvention supplémentaire aux thésards à des fins de reproduction des thèses pour doubler voir tripler le nombre des exemplaires exigés. Parrainer certaines thèses jugées excellentes dans des domaines pointus, susceptibles d'intéresser la communauté universitaire et savante internationale auprès d'organismes pour publication, une cote part d'exemplaires revenant à l'université.

L'ensemble des difficultés rencontrées, les usages décrits montrent le caractère encore très manuel des opérations. A l'heure des nouvelles technologies et des réseaux, quels peuvent être les avantages pour les échanges ?

III – Les échanges de publications universitaires et les nouvelles technologies : quelles perspectives ?

Il s'agira dans cette dernière partie de susciter un débat entre professionnels venant d'institutions de différents niveaux d'équipements et ne repose pas par conséquent sur une expérience pratique. L'intrusion d'Internet dans les bibliothèques a eu pour effet comme partout ailleurs d'abord de raccourcir les délais des communications et à amoindrir les coûts, vu sous cet angle, Internet est un outil de communication. Ensuite, avec le développement des outils GOPHER, WEB et autres, les bibliothèques offrent une plus grande accessibilité à l'information disponibles qu'elles soient bibliographiques ou en texte intégral : Internet est aussi un gigantesque gisement d'informations susceptibles d'être échangées.

III – 1 – Internet – comme outil de communication entre bibliothèques et les échanges de publications

Comme dans beaucoup de domaines d'application, les bibliothèques ont d'abord utilisés Internet comme outil de communication. Dans les activités de coopération, c'est un moyen d'accroître les échanges et de rendre les communications entre bibliothèques plus efficaces et plus rapides.

- Le courrier électronique, à l'instar d'une simple lettre manuscrite, constitue la première application pour faciliter l'échange entre professionnels impliqués dans des projets d'échanges. Les propositions d'échanges et de recherche de nouveaux contacts peuvent se faire par ce canal très efficace et beaucoup moins dispendieux.

- La deuxième étape d'utilisation d'Internet comme moyen de communication peut être les listes de diffusion professionnelle d'Intérêt général comme PACS – L ou BIBLIO – FR ou d'intérêt spécifique rassemblant des professionnels qui partagent le même intérêt. N'est-ce pas le lieu de proposer la création d'une liste spéciale dédiée aux échanges ?

- La 3^e étape consisterait à publier dans les pages HTML des services web les publications à échanger qu'elles soient imprimées, en ligne ou sur CD ROM avec au besoin leurs sommaires

III – 2 – L'édition électronique et les échanges de publications.

Peut être considéré d'électronique tout document numérisé et stocké sur support informatique. Il peut, s'agir de simples fichiers réalisés par traitement de texte et stockés sur le disque dur d'un serveur connecté à l'Internet, de pages HTML de services web ou de documents papers scannés et stockés sur support informatique. Ces nouveaux types de documents sont de plus en plus intégrés dans les collections de bibliothèques auprès des collections traditionnelles et occasionnent chez les professionnels des débats profonds sur la cohérence, la composition et l'avenir des collections de bibliothèques. Ces documents peuvent être de libre d'accès ou nécessitent une transaction soit avec un éditeur commercial par exemple, un contrat de licence d'accès est alors passé entre ce dernier et l'acquéreur, soit d'un simple login attribué par un éditeur scientifique ; même dans ce cas, on reste toujours dans le cadre d'une transaction. Le problème ne se pose pas en ce qui concerne les documents qui sont libres d'accès puisque leur accès n'est soumis à aucune conditionnalité. Qu'en est-il des documents dont l'accès est protégé ?
Autrement dit, comment, à l'instar de l'échange de publications imprimées, concevoir l'échange de publications électroniques ?
Idéalement, l'échange pourrait se faire via le web par un accès immédiat et courant en terme de périodicité . A l'image d'un contrat passé entre un éditeur commercial et une bibliothèque acquéreur, qui permet à cette dernière d'avoir accès sur un nombre de poste défini à un périodique électronique par exemple à partir d'un login ou d'un mot de passe, ce même procédé est normalement utilisable entre 2 bibliothèques qui s'accordent pour échanger mutuellement les publications des Universités qu'elles servent. Cela supposerait peut être que les universités soient dotées de capacités d'édition égalable à celle des éditeurs commerciaux. Nous croyons profondément que c'est là où se trouve la solution à la crise des bibliothèques universitaire occasionnée par la cherté des coûts des revues savantes alimentées par des universitaires et vendues aux universités par des commerciaux.

Une autre possibilité pourrait être la fourniture de documents mais ce procédé dénature l'esprit des échanges de publications parce que là, il s'agit d'une demande ponctuelle qui peut porter sur toute ou partie d'un document par télécopie ou transfert de fichiers entre 2 ordinateurs. Plusieurs projets existent dans ce domaine : ARIEL, EDIL, FASTDOC, EURILIA, REDD… Opération très rationnelle qui pallie à l'insuffisance des ressources documentaires dans les bibliothèques et qui privilégie l'accès à la possession. Ce secteur est en nette progression et est largement utilisé. Le déclin de « l'ordre du livre » est annoncé mais, même avec la progression de l'électronique, l'échange de publications imprimées demeure une solution parce que les licences d'accès négociées avec les éditeurs commerciaux ne permettent pas l'échange, l'accès étant limité à la clientèle que sert l'institution qui a signé le contrat.

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Division Number:	**V**
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Joint Meeting with:	-
Meeting Number:	101
Simultaneous Interpretation:	-

Present state and future of the international exchange of publications in the National Diet Library

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Abstracts:

As the "national exchange service" of Japan, the National Diet Library (NDL for short) has been conducting exchange of publications, mainly official publications, with most of the countries and regions in the world. With the change of the times, however, we are obliged to review the framework of our exchange service. The international exchange of publications is not only a means of collecting library materials but also a library cooperation activity. And, even in the digital age, its importance still remains as one of the various ways to distribute information internationally. What is necessary in the coming years is to clarify the range covered by the international exchange in our acquisition activities and to develop a more effective acquisition strategy.

Introduction

International exchange of publications is a means of collecting library materials, especially official publications that are difficult to acquire through regular commercial channels. It also has an aspect of an international library cooperation activity, in a broad sense, which promotes "the free exchange of ideas and knowledge among the peoples of the world" as written in the UNESCO Convention. When we think of the future of the international exchange in the digital age, it is imperative that we should return to these two roles and examine them further.

In this report, I will first introduce the current status of international exchange in the NDL on the basis of its history, then raise several points of contention about the present issues and what we should do in the future.

Current status of international exchange in the NDL

The NDL has exchange relations with most countries in the world, currently conducting exchanges with 895 institutions of 154 countries and 2 regions and 54 international organizations.

In retrospect, the NDL has been functioning as an international exchange center of publications since its establishment in 1948 when it took over the Japanese government's international exchange project that the Ministry of Foreign Affairs had conducted since 1875. The Library was officially designated for the "national exchange service" when Japan ratified two conventions, that is, *Convention Concerning the International Exchange of Publications* and *Convention Concerning the Exchange of Official Publications and Government Documents between States*, in 1984.

In the legal framework, *the National Diet Library Law* provides that 30 copies of each official publication must be deposited, which enables the Library to keep two or three copies for its own collection and use others for international exchange purposes.

The international exchange of official publications falls into three categories, namely, "blanket exchange", "selective exchange" and "specified exchange". "Blanket exchange" is a system whereby major official publications are comprehensively exchanged based on agreements between governments or conducting institutions. Our present partners are the following six institutions:

1. Library of Congress (USA)
2. National Library of Australia
3. Berlin State Library - Prussian Cultural Heritage (Germany)
4. National Library of Canada (shipped to University of British Columbia Library)
5. University of California at Berkeley (USA)
6. National Central Library (Taiwan)

"Specified exchange" means to exchange basic official publications mutually specified according to an agreement between the governments or the institutions concerned. This exchange is more limited in scale than the blanket exchange. At present, this form of exchange is operated with these 5 institutions: the United Nations Library (in Geneva), the British Library, the Bibliothèque nationale de France, the Russian State Library, and the Royal Library of Belgium.

For exchange with many other institutions, the method called "selective exchange" is taken, that is to exchange materials selected by each other with consent.

Besides official publications, we purchase commercial publications wanted by our partners and exchange them based on the principle of exchange in equal amount or equal price. In particular, exchange of national literature is important. That is, we acquire Japonica, materials on Japan published in other countries, while to those countries we send materials on them published in Japan. This arrangement started in fiscal 1979 with the International Exchange Bureau of Denmark. Since then, the following addressees have been added: the Royal Library of Sweden, the National Library of Poland, the National Library of Romania, the Hungarian National Széchényi Library, the National Library of the Czech Republic, the National Library of Serbia, the National Library of Canada, the National Library of Norway, and the National Library of Korea.

In addition, our Library is designated as the depository library by several international organizations and receives their publications. Since the first designation by the United Nations in 1949, the number of the organizations has increased and decreased. We are now designated by 17 organizations.

The statistical outline is as follows. To begin with, in the movement in the number of exchange partners and received materials, the former has been increasing constantly. On the other hand, the latter reached the peak in the 1980s, after that, showed no fluctuations, and has been decreasing little by little in recent years (see Figure 1).

Then, as regards to the details of partners, many of them are in Europe, Asia and North America. Classified by kind of institution, the rate of academic institutions such as universities, governmental agencies, including research institutions, learned societies and associations, and special institutions is high. Especially, we have established a close relationship with the national library of each country. If sorted by country, 129 institutions are in the U.S.A., 56 in China, 47 in the Republic of Korea, 43 in Germany, followed by Britain and then India (see Table 1).

Finally, I would like to outline the NDL's acquisition of materials in fiscal 2000. The rate of publications acquired through exchange among our foreign materials is approximately 20 percent for both books and serials, about 90 percent of which are official publications. In recent years, digital materials have been increasing, especially CD-ROMs (see Table 2).

Changes in the situation of exchange

Next, I will discuss problems we face, examining recent changes in the situation of exchange.

1. Change of framework of exchange: from blanket exchange to selective exchange

The blanket exchange system, which dates from the 19th century, had the advantage of simplicity, in an age when each country was not familiar with others' circumstances of publishing. However, when we asked if those materials were actually used and the materials needed by the other were specified, the defect was that many materials for exchange did not meet the needs of the recipients. Through changes of the external environment, such as increase of official publications, addition of partners, reduction of circulation with restricted budget (decrease of deposited publications), rises in postage, and transitions of publishers of official publications to commercial companies, the institutions operating the blanket exchange with the NDL have decreased from 12 in 1959 to 6 at present. With regard to serials, we selected the Core Set Serials based on the demand of the LC in 1995, reconsidered contents sent to the partners of the blanket exchange, and virtually switched to the selective exchange.

2. Decline of importance as a means of collecting materials

As the result of easier acquisition of bibliographic information of major countries, well- organized circulation of commercial publications and increased number of purchasable materials, the importance of international exchange as a means of acquisition of materials has declined. In former communist countries, because of liberalization of the economy, activities of wholesalers and bookshops increased and we do not necessarily acquire materials via libraries. The defects of international exchange, such as unstable acquisition as compared with purchasing, difficulty in continuous and systematic collection of multi-volume publications and being time-consuming, have become noticeable.

3. Regional unevenness and a gap between supply and demand

To improve our international exchange services, in 1993, we sent out a questionnaire to 319 major exchange partners to collect data on titles we sent them, titles we received from them, whether they want Japanese language materials and their areas of interest. We received responses from 225 institutions. Many of them wanted to receive materials in English. Those who wanted to receive materials in Japanese was only 39 % (98 institutions), of which 52 were in China, Korea and other Asian regions. In Europe and the

US, only institutions of oriental and Japanese studies wanted to receive materials in Japanese.

On the other hand, there was a strong demand for materials written in English. Many institutions' requests concentrated on limited materials such as major statistics, white papers and annual reports. In response to the concentrated demand for specific materials, the NDL had been microfilming about 200 titles of government publications and sending them to 14 institutions since 1977. After seeing the result of the questionnaire, we changed that into microfilming of about 40 English titles and started to send them to the expanded number of 42 institutions.

4. Impact of digitization of materials

With the rapid increase in provision of electronic information, such as web sites and CD-ROMs, more and more book form publications are ceasing publication. There are many merits in the transition to electronic information, but libraries need facilities to ensure access to electronic information.

Future of international exchange

Today, the methods of exchanging knowledge and thoughts have transferred from the exchange of paper media to the circulation of information by electronic media. More and more official publications, such as government information and parliamentary documents, are being digitized and becoming accessible on the Internet. We cannot doubt the fact that the foundation of the international exchange of paper media is shaking.

Libraries must adapt themselves to acquisition of electronic publications and positively promote electronic information exchange. In fiscal 1998, the NDL started to operate a networked system for branch libraries in the executive and judicial agencies of the government, and it has been carrying out experiments on the preservation and provision of electronic information. We think that the role of international exchange cannot avoid being limited when methods for quicker and inexpensive circulation of information are being established.

However, as I mentioned at the beginning, the exchange service also has a positive meaning of promoting international understanding, as well as being a means of collecting materials. In view of the international information divide, there are still many countries that require exchange of materials in paper form. We have to consider this diversity and act in response to it.

It goes without saying that international exchange has the feature of being one of the most effective means of collecting government publications, doctoral theses which are left out of the commercial distribution process, national literatures, reproduced old materials and microforms. From now on, we need to clarify the areas that the international exchange service should cover and develop a more effective collection strategy.

Finally, we would like to raise the issue of the language barrier from the Japanese standpoint. Only insufficient information has been given in response to the deep interest in Japan from abroad, and the language barrier has long been pointed out. Concentration of demands for limited English government publications is structurally inevitable. The NDL intends to promote the microfilming of English materials in high demand positively as ever. Considering Japan's position in the scene of the world's information exchange, the role of the NDL is important. We will continue to make the necessary efforts to fulfill it.

Table 1 The Items of Exchange Partners

Asia	283	31.7%
North America	150	16.8%
South America	80	9.0%
Europe	272	30.5%
Africa	63	7.1%
Oceania	44	4.9%
□□□□□Total	892	100%

Table2 Acquisition of Foreign Materials in NDL (Fiscal 200)

Books			
Purchase	Gift	Exchange	Total
32,125	4,870	8,962	45,957
69.9%	10.6%	19.5%	
Serials			
Purchase	Gift	Exchange	Total
96,302	10,368	61,245	167,915
57.4%	6.2%	36.5%	
Non Book Materials			
Purchase	Gift	Exchange	Total
68,865	385	26,142	95,392
72.2%	0.4%	27.4%	
The Sum Total			
Purchase	Gift	Exchange	Total
197,292	15,623	96,349	309,264
63.8%	5.1%	31.2%	

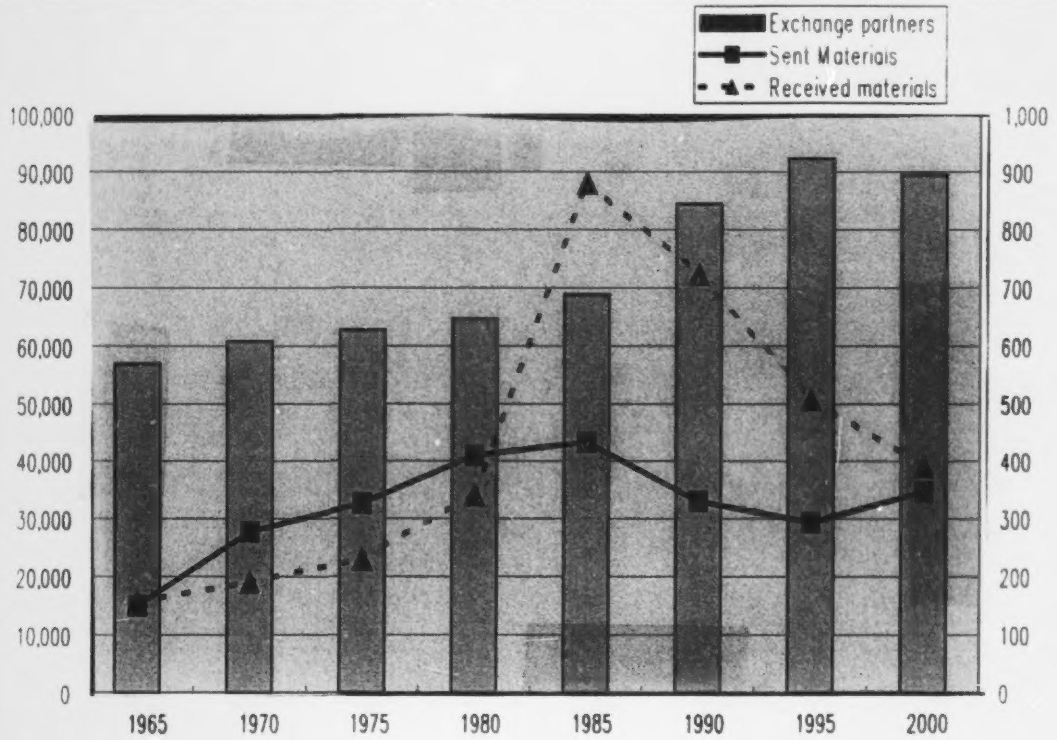

Fig1 The Change of Exchange Partners and Materials

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The Role of the Directorate of Studies in the Legislative Work of the Hellenic Parliament

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Foreword

The form of government of Greece is that of a parliamentary republic[1]. The legislative power is exercised by the Parliament and the President of the Republic[2]. The Hellenic Parliament consists of one Chamber with 300 members elected through direct, universal and secret ballot for a term of four consecutive years[3]. In practice, however, the parliamentary mandate rarely comes to an end in four years as, quite often, there is early dissolution of Parliament and promulgation of early elections - according to the provisions of the Constitution[4].

The main *legislative duties of MPs* consist in the submission of law proposals[5], the elaboration of Bills and law proposals, participation in the work of the parliamentary committees and debate in the plenary session of the House.

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[1] Article 1 of the Constitution. The Greek Constitution was adopted in 1975 by the fifth Revisionary Parliament which was elected in 1974 - after the collapse of the seven years' military regime and the declaration of democracy. It was first amended in 1986 mainly as regards the powers of the President of the Republic and amended for a second time in April 2001. This recent amendment was quite broad (about 3/5 of its articles were revised) and its basic characteristic is the inclusion of new articles and provisions that were required by the needs of our time in the spirit of globalisation.

[2] Article 26 of the Constitution.

[3] Articles 51, 53 of the Constitution.

[4] Articles 32 par. 4, 41 par. 1 & 2 of the Constitution.

[5] "Bill" is the legislative Act submitted by the Government; "law proposal" is the legislative Act submitted by MPs. Bills are the great majority of Acts submitted to the House; only a very few law proposals have been voted by the

Question time is when MPs exercise parliamentary control, scrutinising the actions and omissions of the Government thereby holding it to account. The members of Parliament in the exercise of their parliamentary duties enjoy the assistance of the Services of the House.

Establishment and Organisation of the Directorate of Studies

The Greek Constitution provides in article 65 par. 5 that "A Scientific Service to the Parliament may be established through the Standing Orders to assist the Parliament in its legislative work". This article was later elaborated in the Standing Orders of the House[6] which provided for the establishment of a Scientific Service consisting of three Directorates: a) the Directorate of Studies, b) the Directorate for Informatics and New Technologies and c) the Library of the Parliament[7].

The Scientific Service of the House - presided over by the *Scientific Council* of the Parliament, made up of five eminent University Professors - is under the direct administrative supervision of the Speaker of the House and the Secretary General. In other words, the Scientific Service does not come under any of the three General Directorates of the Parliament.

The aforementioned constitutional provision remained inactive until 1988 when an open competition was proclaimed to fill the posts of the Directorate of Studies[8], which was designed to include in its field of activities the tasks usually undertaken by a Parliamentary Research Service.

The personnel were recruited on the basis of a written and oral examination according to high-level requirements and specific qualifications[9]. The post of member of the Directorate of Studies is compatible to the post of University Teacher or with that of a practicing lawyer .[10] However[11], although being parliamentary officials, they are not civil servants and are employed under an "indefinite time private law contract"[12]. This decision was made by the legislature so as to enable the officials of this Directorate to

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Parliament and became Statute law of the State. To give an example: in the session October 1998 - May 1999, 81 Bills were discussed and voted by the House, whilst only 6 law proposals were submitted for discussion and only 1 became statute law.

[6] Articles 160 -163 of the Standing Orders of the House.

[7] The Library of the Parliament – one of the biggest parliamentary libraries worldwide, as concerns the number of volumes – was established in 1844 by the first Hellenic Parliament which was elected following the entry into force of the 1844 Constitution. The actual Standing Orders of the House provide that it forms part of the Scientific Service of the House.

[8] The Directorate of Studies actually consists of three Departments: a) the department for the elaboration of Bills and law proposals, b) the department for parliamentary research and studies, c) the Secretariat.

[9] Article 162 par. 2 of the Standing Orders reads as follows:" The Heads of Departments and the Research Fellows of the Directorate of Studies are appointed on the basis of the respective public proclamation which expressly mentions the qualifications required. The Scientific Council is responsible for the evaluation of academic qualifications, scientific research and publications of the candidates as well as for the assessment of their personal qualities. The Scientific Council submits to the Speaker of the House its recommendation for the candidates to be recruited ..."

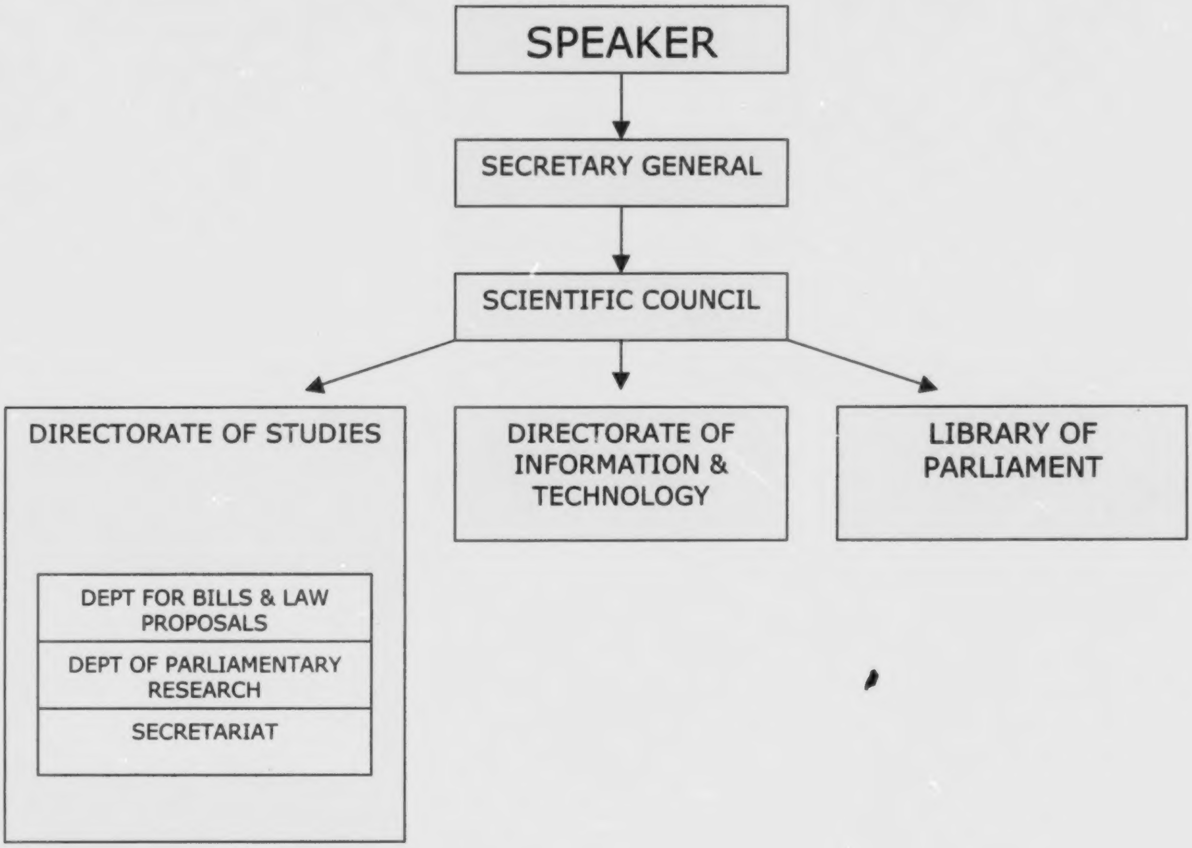
[10] Article 161 par. 3 and 162 par.2 of the Standing Orders.

[11] Out of the 24 posts provided in the Standing Orders, only 14 are actually filled. The recent amendment of the Constitution has resulted in the need for modification of the Standing Orders of the House. It is actually under consideration to increase the number of personnel in the Directorate and to proceed to open competition for the recruitment of new members.

[12] 'Contrat de droit privé de temps indéterminé'. This means that staff have the same rights and obligations as civil servants but not the same pension and social security insurance scheme benefits. The advantage is that unlike civil servants, staff employed in this way are free to continue with other professional activities.

be actively involved in academic and professional communities[13] and thereby, keep up to date with professional developments, thus enabling better performance of their duties in the Parliament.

The organization and function of the Directorate is described in the "internal regulation" of the Service[14] and is illustrated by the following diagram.


SPEAKER
SECRETARY GENERAL
SCIENTIFIC COUNCIL
DIRECTORATE OF STUDIES
DEPT FOR BILLS & LAW PROPOSALS
DEPT OF PARLIAMENTARY RESEARCH
SECRETARIAT
DIRECTORATE OF INFORMATION & TECHNOLOGY
LIBRARY OF PARLIAMENT

Duties and Responsibilities in Legislative Work

The principle role of the Directorate of Studies is to assist the legislative work of the Parliament in a purely scientific manner, impartially and objectively without any influence from political parties [15], and there are several domains in the day-to-day parliamentary work where the Directorate is called to assist:

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[13] The number of officials in the two Departments of the Directorate is actually fourteen. One of them is the Director and two are the Heads of the Departments. Thirteen out of fourteen are of legal background (practicing lawyers – members of the Bar Association) while one is an economist. Twelve of the fourteen members are PhD holders. Nine members are University Professors.

[14] Official Gazette vol. A/ 101/25.4.1989

[15] The Parliament entitles all MPs to three personal assistants (i.e. one is employed by the private sector and remunerated by the Parliament, while two are detached from the civil service). Although these assistants - who do not become parliamentary officials - may be required to undertake research, give legal advice or offer any other help requested by the MP, they work only for the benefit of the MP and their quest does not necessarily go in great detail.

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Elaboration of reports on Bills/law proposals

Each Bill[16] and law proposal submitted to the Parliament is forwarded to the Directorate for scientific elaboration. The research fellows in the Directorate proceed to a thorough and detailed examination of the Act[17] based on legislation, jurisprudence, European law and legal documentation. A report is then drafted which aims to draw MPs' attention to any incompatibilities in the Bill/law proposal, with regard to the Constitutional provisions, national legislation, EU primary or secondary legislation, case law and international law. Whenever applicable, these reports include comparative elements on similar legislation in other European countries.

These detailed reports[18] are of great importance to the legislative work of the Parliament as they form *arte legis* documents[19], which, quite often, raise issues for discussion in the plenary session and, despite their mere advisory nature, have sometimes resulted in the modification of provisions previously agreed upon in the Standing Committees.

The drafting of the reports requires speed, accuracy and up to date expertise: there are times when a Bill submitted to the Parliament is brought for discussion before the plenum or the section in only a few days. As a rule, the reports ('expose de motifs' or 'bills digests') are delivered to the MPs prior to the debate in the plenary session and, occasionally, before the elaboration of the Bill by the relevant Standing committee. This was the situation under the previous Constitution that provided for the passing of legislation only by the Plenary Session or the Summer Section – when Parliament is in recess.

The amendment to the Constitution of April 2001 introduced a new article[20] which provides for the possibility of debate and passing of legislation by the Standing Committees. This new legislative procedure will be provided for in the Standing Orders of the House whose amendment is under consideration. It is believed that the passing of legislation also by the Standing Committees will increase the quantity of voted legislation.[21] It will also most probably have a significant impact on the corresponding work of the Directorate of Studies.[22]

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[16] Bills which ratify international treaties/conventions are excluded from elaboration by the Directorate - unless expressly required to do so. The Speaker of the House may make this request on his own initiative or foloowing a request by the leader of the opposition or the leader of a parliamentary faction. Also excluded are Bills codifying national legislation (e.g. civil law code, criminal law code etc). This is because no amendments may be brought to such Bills which are either voted on the whole or rejected. The Speaker of the House may make this request on his own initiative or following a request by the leader of the opposition, leader of a parliamentary faction.

[17] Not only of the text itself, but also of the reports ('exposé des motifs') which presents the principles of the draft legislation and a detailed explanation on the need for the proposed legislation according to its drafter's opinion.

[18] The reports are drafted by the research fellows of the Directorate, discussed and reviewed by the Director and by one member of the Scientific Council, signed and distributed to all MPs.

[19] At the end of each parliamentary period these reports are published and are freely distributed to public authorities, the Judiciary, Universities and to anyone interested in obtaining background information on passed legislation. They also serve as tools to the interpretation of statute law, similarly to the explanatory reports, the proceedings of the Standing Committees and the minutes of Parliament.

[20] Article 70 par.2,3,4,5 of the Constitution.

[21] The Hellenic Parliament has voted 2.759 Statute Laws in the years 1975 – 1999.

[22] The Directorate of Studies prepared reports for 120 Bills out of the total 388 Bills which passed through the Parliament in the last parliamentary period (i.e. October 1996 – March 2000).

Questions submitted by MPs

MPs come to the Directorate with various kinds of questions[23] regarding the exercise of their parliamentary duties. This is usually in writing[24] although in some rare cases oral requests have been answered.

The most interesting questions are usually those where comparative law elements are required in order to enable MPs to submit law proposals or better sustain their arguments in the debate of Bills. The majority of questions, however, need responses based on national legislation or E.U. secondary legislation and include no comparative research. Quite often the questions addressed to the Directorate are composite and do not rely merely on the provision of information but on research or critical analysis: MPs are free to ask the scientific opinion of the Directorate on any issue of parliamentary concern.

Questions submitted by the Speaker and the Secretary General

The Directorate of Studies may be called directly by the Speaker of the Parliament or via the Scientific Council, to contribute to scientific projects, to deliver opinion on crucial parliamentary and legislative issues, to participate in parliamentary fora, or to undertake research on specific legislative problems. This is usually the most challenging work which is often over and above daily business.

The Secretary General[25] addresses to the Directorate of Studies requests on legislative procedure and other parliamentary matters submitted by other Parliaments, international organizations, public authorities etc. Moreover the Secretary General may also require information on comparative parliamentary procedures and practices as well as other reports and studies on current issues of parliamentary concern. Requests from the Speaker and the Secretary General are generally given priority, depending on their urgency [26].

Legislative research

One domain that used to be very active in the first years of the Directorate and which eventually diminished in size and enthusiasm due to the enlargement of other fields of activity, is that of legislative studies and research[27]. The members of the Directorate, considering the actual needs of parliamentary work at each period of time, may offer to undertake the preparation of research studies on specific topics of broader parliamentary interest which aim to assist the legislative work of the House[28]. The proposals are discussed with the Scientific Council. The research papers are publications of the Parliament freely distributed to anyone interested.

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[23] After the elections they usually ask whether the exercise of their professional activity is compatible with their status as MPs, according to article 57 of the Constitution which was recently amended. During the parliamentary period the questions asked are related to the exercise of their other parliamentary duties.

[24] The question is registered by the Secretariat and submitted to the Director who in collaboration with the Head of Department will decide the research fellow responsible for handling it. The draft response is discussed within the Directorate, countersigned by the Director and dispatched to the MP. Further clarifications may be given orally.

[25] In Greece, as in several other countries, the Secretary General is not a parliamentary official but is appointed directly by the Speaker and does not necessarily have a legal background. Thus, in Greece, the post of the Secretary General is not that of the legal advisor to the Speaker, as in many countries.

[26] During the parliamentary session April 2000 – June 2001, the Directorate of Studies inter alia elaborated reports on 39 Bills and replied to 120 questions by the Speaker, the Secretary General, MPs, foreign institutions etc.

[27] Ten research and documentation papers were published by the Printing Office of the Parliament in the period 1989 –1993.

Other forms of assistance

Research fellows regularly attend the meetings of certain parliamentary committees [29] and they contribute to their work by providing scientific background information and specific know-how. Whenever expressly requested, research fellows support the work of other committees in the performance of their legislative tasks. The imminent amendment of the Standing Orders of the House to meet with the new provisions of the revised Constitution will affect the legislative procedures in the Standing Committees.

A SWOT (Strength, Weakness, Opportunities, Threats) Analysis

Strengths

- Quality of staff
- Support of an external, academic Council
- Good relations with other Support Services of the Parliament: in the performance of its duties the Directorate of Studies routinely seeks the invaluable support of the other Services of the Parliament[30]. Therefore, good relations and close co-operation between the various services of the House is a *condition sine qua non* prerequisite for the successful accomplishment of its duties.
- Staff links with professions and the academic community.
- The Statutory obligation of public authorities to provide information: the right to obtain information from public authorities[31] without the usual bureaucratic trammels is another important support in the daily bulk and pressure of time!

Weaknesses

- Only 14 of the 24 establishment positions are filled: the rather small number of members in the Directorate and the increasing number of requests in the broad sector of parliamentary research, remain the main obstacles for any further development in the work of this service. This means that there are sometimes delays in responding to requests and difficulties in handling the variety of questions.
- 13 of the 14 staff are lawyers (one economist) necessarily limiting the range of expertise available to MPs

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[28] A few examples of such papers are: 'the historical development of the parliamentary budget in the period 1975-1989', 'the role of national Parliaments in the European Community', ' review of the international position of Korea, Peru and Chile in view of the Bills on the establishment of new Greek Embassies', and 'short-term economic prospects in the European countrie' (information bulletin).

[29] E.g. the Committee on Technology Assessment, the European Affairs Special Standing Committee.

[30] E.g. the library, the General Directorate for parliamentary work, the Directorate for Informatics and new technologies, the General Directorate for International relations and Communication, etc.

[31] Article 162 par.6 of the Standing Orders provide that "Ministries, Public Service, Local Authorities, Universities, Research Institutes, Public Libraries and other legal entities of the public sector are obliged to provide any requested information necessary for the accomplishment of the work of the Scientific Service of the Parliament".

- The requirement for the submission of written requests through a hierachy which can slow the process

Opportunities

- Growing demand
- Decision to recruit full complement of staff to 24 provides the opportunity to broaden the range of epertise available to MPs and thus convince them further of the value of the service
- Support of a distinguished external Council provides prestige and a continuing opportunity to develop academic networks.

Threats

- Unmet MP needs for specialised expertise.
- Increasing work levels.

Concluding suggestion

The research services of national Parliaments would greatly profit from the establishment of close co-operation between them. Quite often questions asked by parliamentarians have already been examined by other Parliaments. Very often, problems and difficulties faced by national parliamentary research services are similar to those being dealt with by services in other Parliaments.

It would be worth considering the possibility of establishing a new website to facilitate communication between the research services of national Parliaments. This would render easier the immediate exchange of information and experience.

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Integration of Information Services in the Parliament of Zimbabwe

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Introduction

The underpinning philosophy of this paper is that information and information systems are the "*glue*" which hold an organisation together and that without this glue, the organisation will ultimately fall apart. Indeed, a recent statistic Laudon and Laudon (2000) indicates that of all companies/organisations that suffer a complete and irretrievable loss of information systems, 46% are bankrupt within six months.

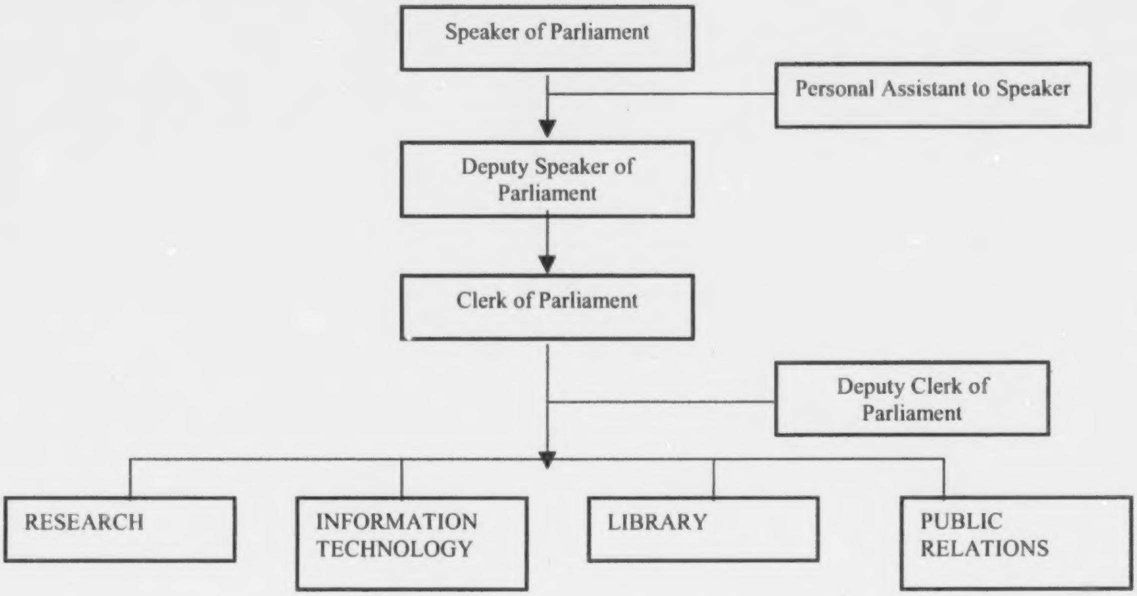
Information systems have the capacity to support all levels of decision making within an organisation from operational through tactical (managerial) to strategic decision-making. It is the additional capacity to provide a competitive edge that has driven many organisations to make heavy investments both in information systems and the information technology to run them on. It was this realisation that drove Parliament of Zimbabwe (PoZ) to develop an information system that addressed the needs of the users – Members of Parliament and Civil Society Organisations.

Evolution of Information Systems at PoZ

Prior to 1999 the PoZ had four departments which were managing information delivery services namely:

- Research
- Library
- Public Relations
- Information Technology

The diagram below shows the original position.



The Library

The Library operated as a depository public entity. This meant that it was not service-oriented. The result of this was that the other elements in the parliamentary support chain (research, analysis, parliamentary education, committee secretariats) had to build their own information resources and became dependent for information from government departments which Parliament is supposed to scrutinise to achieve accountability of public expenditure. The other consequence of this was that Members of Parliament and staff became frustrated with the lack of relevant parliamentary information services and thus lost confidence in the library.

The institution then made a decision with the assistance of consultants from United Kingdom, Australia and Canada to redefine the core business of the library as "*Provision of information for the research needs of Parliament*." This led to a revision of the client base, relevant holdings and collections development and the management issues which flow from these. The bye-laws of the library have since been reviewed to refine the client base restricting it to Members, parliamentary committees, and parliamentary staff with others granted access only with specific approval of the Clerk.

An exercise carried out by a committee of leading librarians in Zimbabwe has since recommended a weeding exercise. The current collection of the Library of Zimbabwe does not focus on materials of contemporary parliamentary relevance but includes extensive holding on subjects such as history, voyages, languages, anthropology, religion, medicine etc. While it is conceivable that some aspects of these subjects may be of interest to Members of Parliament from time to time, such traditional monograph dominated materials are not the stuff of a working parliamentary collection. This situation arose out of the fact that there was no coordination between the Library and the end-users, MPs and Research staff.

Research Department

Because of the library's shortcomings as a parliamentary library and the lack of cooperation between the Library and the Research Service, too much time was taken by the research team on providing its own information base. Because of the limited capacity of the Public Relations department, research resources were also diverted to assist it in its various tasks. The result was a dilution of research resources and a frustration that primary clients' needs remained unmet. This affected the quality of debate in the House and led to a low opinion by Members of Parliament of the research facility.

With the assistance of consultants, the core business of the Research Department was identified as the provision of oral and written, value added research and analysis services to Members of Parliament and Committee Clerks. The department now provides:

- Immediate oral briefs;
- Oral briefings on notice;
- Bills digests;
- Memoranda or short notes in response to individual client requests;
- Individually tailored papers;
- General distribution papers for conferences and workshops.

In the last financial year 1 890 requests were received by the 4 staff of the Research Service.

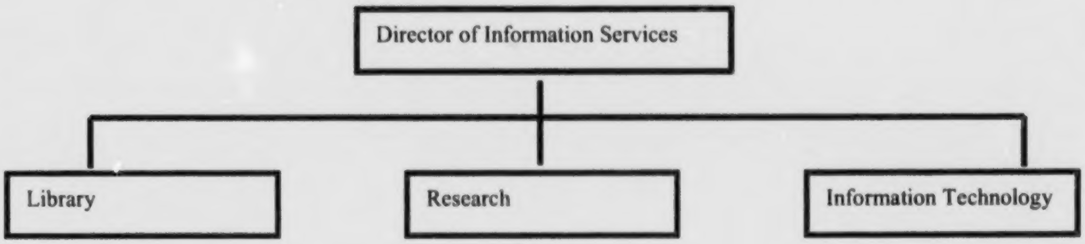
Public Relations

As with the Library and Research Services there was also dissatisfaction among Members of Parliament on the services provided by the Public Relations Department. The rationale for creating this department in the 1980s was to improve knowledge about Parliament in the community, assist people better understand the Parliament and thereby bridge the gap between PoZ and the community. However, this function was not properly carried out because of an unclear determination of core business, an unsatisfactory resource base, a reactive rather than an initiating approach to its business and lack of cooperation between staff in the Research and Information Departments. However, with the restructuring exercise carried out after the consultants, the core business of the information department was identified as provision of public education and relations. It now has a staff of six and its main functions are educating the public about the operations of PoZ. It is not part of the new team but reports directly to the Clerk of Parliament.

Information Technology

Prior to 1999, the Information Technology Department existed as a stand alone in the institution manned by one member of staff. The IT department did not have a clear understanding of its strategic role in improving information delivery services. It functioned more as an acquiring agency of software and hardware. However, as a result of the integration exercise, a strategic framework in which IT could operate was created. This was done on the realisation that the provision of information, research and parliamentary education services supported by appropriate information technology can make a significant contribution to the capacity of parliaments/legislature to play their proper role *vis-à-vis* the Executive and, thereby, to make a contribution to the quality of democracy. This has been recognised in the current Parliamentary Reform Process in Zimbabwe.

The new integrated information delivery service in Zimbabwe is headed by a Director. The structure of the department is as shown below.



Advantages of an Integrated System coordinating services through one head

- Integration has transformed the splintered efforts of the various units into coherent whole;
- It has established productive cooperation with other professional support services ensuring that all the resources of the PoZ are deployed optimally in the interest of Members of Parliament;
- The process of integration has improved administrative efficiency (fewer levels of approval) reduced the burden on the Clerk and has ensured timely and targeted spending of funds;
- The integration process has improved the acquisition process of the Library, as the Library now purchases relevant books and periodicals. The Research department now has a direct role in the purchasing of library materials;
- It has improved teamwork ethos as the heads of the departments meet regularly to discuss work-in-hand and progress on specific issues etc;
- Communication has greatly been enhanced; and
- The devolution of power from the Clerk to the Director has reduced the hierarchical structure and unnecessary delays. Hierarchies are not only resource costly but may be counter-productive to optimal possibility of miscommunication with another link in the reporting or clearance chain.

Conclusion

The greatest achievement of integrating parliamentary information services in the PoZ has been the build up of a spirit of team dynamic. Effective service cannot be provided in pressured parliamentary circumstances except by effective teamwork. No staff in the business of information delivery can afford to regard an urgent request as not their business; all staff need to assist each other to meet deadlines, e.g. by responding to requests for assistance in identifying best possible sources of information on a given requests. The amount of synergy that has resulted as a product of integration has increased efficiency and restored MPs' confidence in the information delivery system of Parliament. This is evidenced by the utilisation of the various components of the information delivery service. Furthermore, MPs seem to be clearer now on where to get what type of information. As a result of integration the value of Parliament as a watchdog for the public has been enhanced. Its responsiveness has been increased. In a way the integration has gone a long way towards assisting the Parliament of Zimbabwe achieve its constitutional mandate of making laws for the good governance of the nation.

Lesson Learnt

- Information should be regarded as a key resource;
- No corporate strategy is complete if there is no IS/IT strategy;
- IS/IT is too important to be left solely to IS/IT professionals; and
- Planning for IS/IT should be an important and integral part of any institution's competitive strategy development.

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Establishing a research service in the Norwegian parliament: why the right time was now

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General assumptions regarding a research service in parliament

Let me start with a few general assumptions regarding the establishing of a research service in parliament that in my view were relevant in establishing such a service in the Parliament of Norway.

Firstly the fact that research services were established in other parliaments, not least in the neighbouring country Sweden, played a role in raising the question of such a service in the Norwegian parliament as well.

Secondly the well-known fact that parties in opposition are more likely to initiate a strengthening of the parliament's own expertise characterised the Norwegian process as well. It seemed, however, that being in opposition was in itself not sufficient. The party with the tradition of being the ruling party, in Norway's case, the Labour Party, seemed in general more sceptical to a body of experts in the parliament, even when in opposition. For the more traditional opposition, the coalition parties, it also took a while before an initiative was taken, and then it was related to a particular incidence where the opposition expressed a certain lack of confidence in the government's provision of information to parliament.

Thirdly such factors as frequent changes in government and, not least minority governments, both factors calling for a parliament with more initiatives, characterised Norwegian politics at the time a research service in parliament was initiated and established.

Last, but not least, the increase in scope and complexity in issues dealt with in parliament that had made the need for expert assistance in parliament more obvious, became an important element in the Norwegian debate as well. This was demonstrated by the fact that when a research service was actually established in October 1999, all parties were in favour.

The first initiative

When the Norwegian Parliament in the mid 1970s had a thorough examination of its administrative rules and procedures, one question – among many other and more extensive ones – was a research service for members of parliament. Reference was made to such services in other parliaments such as the American Congress, the House of Commons and particularly the service in the neighbouring Swedish parliament. At that time the latter had been in existence for almost 15 years and experienced a steady increase in its requests.

It was at this point not recommend to actually establish a research service in the Norwegian parliament, but rather to set up a special commission – a well known political means when you are not yet prepared for the final decision – to look into the matter. More specifically the mandate was to clarify a potential need for such a service in the Norwegian parliament, bearing in mind the strong tradition in the Norwegian political system of ministries having to bring forward all relevant material and background information on issues brought before parliament. This has been used to argue that the need for a research service for the members of parliament is less in our country.

A commission was, however, not established. It has not been possible to find out exactly why, except that an election took place before it was dealt with in parliament, and members less interested might have been elected. The main reason is most likely that the same political party - the Labour party – with a long tradition of being the ruling party came back into power with an increase in their mandate. Members of this party would be less inclined to strengthen the parliament's own expertise, not least because there also was a general scepticism about such a body in this party.

The argument at this point was that too little was known about the actual need for a research service in parliament, and also that too little was known about services and assistance already available to Members of Parliament, such as library and archives, indicating an inclination towards describing the present situation as more or less satisfactory.

Even though the main scepticism about experts in parliament had come from the Labour party, such scepticism was found in other parties as well. I can myself remember a debate on television in the 1980s between a prominent member of a right and a professor from the Institute of Political Science about parliamentarians making more use of researchers and university people in their political work. The Member was very clear in his view about not having "experts taking over politics" as he put it, and in stressing that in politics it is the judgement and opinions of the politicians themselves that count. This is an example that there may also be parliamentarians who on a personal basis, are sceptical about the role of experts in politics.

The process of establishing a research service

After this small attempt in the late 1970s, the issue was not put on the agenda in the Norwegian parliament until the latter part of 1990s. In the 1980s Norway had changing governments, that is between the Labour party and a coalition government. The longest period was with a coalition government, and as it is the opposition that normally would raise the question of strengthening the parliament, an initiative should then have come from the Labour party. As indicated above, this party had a general scepticism about experts taking part in politics, and this, together with their tradition for being, and the anticipation of soon becoming, the ruling party, made such an initiative less likely.

A newspaper debate

Prior to the issue of a research service in the Norwegian parliament becoming an issue in the parliament in the latter part of the 1990s, a newspaper debate among politicians on this issue a few years earlier gave an indication of what the arguments would be. At this time the Labour party was back as the ruling party and the debate was initiated by a member of one of the opposition parties. His main argument was the need for expertise in parliament in order for parliament not to depend too much on the expertise of ministries, relating this to the constitutional principle of the division of power. The argument of independence for parliament was also related to various interest organisations, more precisely to the fact that such organisations, supplying important information to Members of Parliament, at the same time had an agenda of their own.

While some politicians taking part in the newspaper debate shared these views, others warned against what was described as the power of experts within parliament having an undue influence on the political process. Even though the need for expertise was acknowledged, there was some scepticism about a body of experts with the parliament itself.

Before looking more closely at the arguments when the issue actually came on the agenda in parliament, I will deal with what brought up the issue of a research service in the Norwegian parliament, and started the process that finally led to the establishment of such a service.

The opposition suggests a special commission

What started it was actually an incident where the opposition parties stated that they did not fully trust the governments handling of a certain matter. More precisely, the opposition claimed that the government had tried to unduly influence the opinions of civil servants being members of a special commission set up by the Ministry of Environment to look into the matter of so called "green taxation". This raised the general question of having civil servants as members of special commissions, but it at the same time revived the question of parliament's need for independent expertise. More precisely, the opposition parties in parliament suggested that a special commission should be set up to look into both questions. For the latter, the mandate was more precisely to look into the need to strengthen parliament's own expertise.

In other words one might say that the question of a research service in the Norwegian parliament came on the agenda because the opposition felt that it could not always rely on the government's supply of information, in spite of the minister's duty to inform, referred to above. Another important factor was that the political situation in parliament at that time was such that when all the opposition parties - to the right as well as to the left - agreed on setting up such a commission, they had the majority. The party in power - being at this time the Labour party - had to accept that a commission was established, even though they voted against it.

In the debate the difference in opinion between the opposition parties having put the issue on the agenda and the government party, came out very clearly. While the former stressed the parliaments' need for independent expertise, the Labour party expressed their scepticism by arguing that a body of experts could be too dominant and thus play a role in determining the political agenda. They also pointed to the fact that as the rules of procedure gave parliament the right, at any time, to utilise external experts, a body within parliament was not necessary. Also the parties in favour of strengthening the parliament's own expertise indicated that this did not necessarily mean the establishment of a research service in parliament. This was pointed to as one option, while another option put forward was to strengthen the secretariats in the political groups and in the committees. The larger part of the members in favour of strengthening the expertise in parliament did however see the need for a separate body that could be of use not only to the members, but to the party secretariats and the committees as well.

When the special commission was established it was with members from seven parties in parliament, including the Labour party, and when on April 30th 1997 the commission after six month's work, concluded that a strengthening of parliaments' own expertise was needed, and that a research service should be established, all parties stood behind this conclusion.

This debate when setting up the commission was actually the only debate on the issue. When the commission in 1997 came forward with its report, the report was not put before parliament but just accepted by the Speaker and put into effect.

It is thus this debate, and not least the commission's report, that indicates firstly why the members wanted a research service and secondly what their ideas of such a service would be, and thus has been an important source when actually setting up the service.

What this process shows then is the well known fact that it is the opposition in parliament that is most likely to take the initiative for strengthening the parliament's expertise and thus make the members less dependent on the ministries. This of course makes sense as the party in power will have direct access to information from the ministries and, secondly, will have little interest in trying to challenge the government's policy. The process also shows, that at least in Norway, being in opposition was not enough, which may have to do with the tradition mentioned earlier about ministers' duty to fully inform parliament. An incident that raised doubt about this tradition was what finally put the issue of strengthening the parliament's own expertise on the agenda.

What this process also shows is that eventually parties both in government as well as in opposition came to the conclusion that parliament ought to have its own research service. This may have to do with the fact that the party in opposition today may be in government tomorrow and vice versa. And this is exactly what happened.

At the time the research service was actually established in October 1999, the parties having initially taken the initiative had now formed a coalition government, and one can only speculate if they would have argued as hard for a research service at that stage. Judging from the arguments and conclusions in the report, it seemed that the question of strengthening the parliament's own expertise by now was an issue that all parties could agree on.

Since March last year the Labour party has been back in government, meaning that the research service, since it started in October 1999 has seen two changes in government and thus has been used by parties initially sceptical about a research service, as well as parties in favour. Our statistics show that even though the Labour party used the research service more then twice as much when they were in opposition, it is the more traditional opposition parties that have been the more heavy users with a difference in requests of almost one to ten from being in government as to being in opposition.

The report from the special commission

As indicated above the commission's conclusion to strengthen the parliament's own expertise was supported by members from all parties. In the report are found the arguments for establishing a research service; that is the *why* as well as some aspect on the actual shaping of such a service, that is the *how*.

As to the why, the commission pointed to three main aspects. First the increase in, and the complexity of, issues before parliament, referring particularly to the fact that compared to many other parliaments, the Norwegian parliament often deals with rather specific issues. A second and very important aspect was the increase in parliament's own initiative. A political situation characterising Norwegian politics at this stage with ,more frequent changes in government, and not least with governments not having the majority in parliament, made for a more active opposition, which in turn created a need for its own expertise. A third aspect is the increase in members' external relations, that is international organisations as well as their constituencies.

As to the how, the commission did not get into any detail about the actual shaping of the research service. But it was indicated that it should be a separate unit; not part of the parliamentary library but utilising the library's resources and thus being located in its vicinity. The service should consist of 5 to 7 researchers in such fields as law, political science, history and economics and should assist the members in all their various fields of work. It was indicated that the research service would be particularly useful to members with less access to the party secretariats, that is the backbenchers. The research service should also assist the party secretariats and the committees. Last but not least the commission stressed the political impartiality of such a service.

Establishing the research service in October 1999

As indicated earlier, it is what was expressed in the debate in parliament when setting up the special commission as well as what was actually said in the report, that has been the main "tool" when actually establishing a research service in the Norwegian parliament.

Being in charge of establishing the research service, I would have preferred that the report had been put before parliament, and thus have had a "fresher" debate on the issue when planning and establishing the new service. Such a debate would have given some indications as to the members' needs and expectations, and also implied that most members had been aware that a research service was being established. As it was we had to take into account that many members did not know about the service, and not least that there might be various opinions and expectations as to what was expected of such a service. We thus saw it as a special challenge to inform members about this new service, as well as finding out what their expectations of such a service might be.

I will use the last part of my presentation to explain how we dealt with this challenge as well as saying a few words about our main experience to date along with what we still see as challenges ahead.

As for making the service known in parliament, we of course produced some written material with some background information, describing the service in terms of a Who can use the service, What can we do, How can we be contacted and Who are we. This was distributed to all members, party secretaries and committees, as well as on our intranet homepage. While these were very obvious things to do, we saw that it was not sufficient. We felt that some sort of dialogue with the members was necessary. We therefore contacted the various parties and more or less invited ourselves to one of their party meetings. As this initiative was positively received, it gave us a unique chance both to introduce ourselves and to discuss the new service with our potential users. We saw it as very important to do this at an early stage, stressing very clearly that our objective was to create a service to fit the needs and expectations of members, and thus having an open mind as to what that might be. This was very useful, not least to help get the message across that a request did not have to be ready formulated or in a written form, but that we would be open for more informal discussions as well.

During the almost 2 years we have been in operation we have had a total of about 430 requests from members, party groups and committees. We have so far been able to meet the deadlines, sometimes by discussing a certain reduction in the scope of a request. But with a total of only 5 people, we realise that at a certain point, we may meet a situation where we have problems responding to all the requests.

Let me end by saying that we have a definite feeling of meeting a need in the parliament. The number of requests and the positive feedback we receive are indications of this. But at the same time we feel that there are still many challenges ahead. We still need to get some more feedback from our users in order to make sure that we are supplying the kind of information and knowledge that he or she actually needs and not least in a form that best suits each one. The second major challenge is that we manage to keep ourselves updated and informed in order to make sure that the quality of our products is as good as possible. Lastly we have the ongoing issue of where to draw the line between science and politics. When we introduced ourselves in one of the party rooms and stressed that we would not deal with the political aspects of an issue, the reaction was that that was impossible in a political setting like a parliament, indicating that politics is implicit in all the requests. Our experience is of course that some issues are more political than others, and for these issues it is important to have such political aspects in the back of our mind when dealing with the request. This implies, for instance, that we must be particularly aware of what sources we use, to what extent we conclude or give various alternatives and, not least, not letting what we know about political preferences of the actual party or member influence our work. Such awareness is not least important as our papers go directly into the political process more often that we initially had anticipated.

As I assume that our experience as well as our challenges are very much the same as those found in research services in other parliaments, I have been looking forward to this opportunity to discuss with you various aspects of parliamentary research service.

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Challenges and opportunities to deliver research services to parliamentarians in the Japanese Diet

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Summary

Since the 1990's, parliamentary research services in Japan have been influenced by the changing political environment and the worldwide development of information technology. The National Diet Library (NDL) has been trying to cope with such changes. The Research and Legislative Reference Bureau, the department of the NDL which is in charge of research services for the Diet (Japanese Parliament), has achieved good results in applying new technology to its services and products. The development of the Full-Text Database System for the Minutes of the Diet and the Total System for Research and Information Services are examples.

The widespread use of the Internet has threatened the NDL's advantage over other legislative support organisations: the advantage that it has a huge library collection as a major resource for its research services. The Internet is superior to traditional information resources from the viewpoint of accessibility and quantity. However, information obtained through the Internet is not always reliable. We can say that various forms of printed publications are still important and, more importantly, the Internet cannot compete with the role played by analysis.

It has become more and more important for the NDL to cooperate with other legislative support organisations of the Diet such as the Secretariats and Legislative Bureaus of both Houses, the House of representatives and the House of Councillors. The Research Bureau of the House of Representatives and

the Research Office of the House of Councillors play an important role in supporting Committees and Diet Members. They work very closely with them preparing materials and questions for the Committees, examining petitions and researching and drafting bills sponsored by Diet Members. There is some overlap between their work and that of the NDL, as I understand is the case in some other parliaments. As is also the case in some other parliaments, there is also some competition between them for increasingly scarce resources. The challenge for the future, therefore, is to work cooperatively, not competitively, to realise the common goal of strengthening the legislature and making the Diet open to the public.

Introduction

In Japan, the Liberal Democratic Party (LDP) had been in power for nearly forty years and the operation of the Diet had been largely influenced by prior arrangements and consultations between the LDP and the ministries. But the LDP split during the political reform arguments in the late 1980's and the beginning of the 1990's and was defeated in the general election of 1993. Since then, Japan has entered into a coalition era and Diet Members have discussed reform of the existing systems which are widely thought to be associated with political scandals and economic recession.
Under these circumstances, many Diet Members stress the need for reinforcing the Diet. The major goals of Diet reform are:

- to strengthen parliamentary control over the administration
- to stimulate parliamentary discussion
- to promote efficiency in parliamentary deliberations
- to make the Diet more open to the public.

The National Diet Library (NDL), together with the Secretariats and the Legislative Bureaus of both Houses, has been providing support services which meet the Members' needs. In addition to such political changes, information technology has developed enormously and it has a great impact on legislative research services.

In this context, I will outline the challenges and opportunities for the services of the NDL, especially the Research and Legislative Reference Bureau (hereafter referred to as the Bureau), by using a SWOT (Strength, Weaknesses, Opportunities and Threats) analysis.

Strengths

The Collection

The NDL has a large collection of Japanese and foreign publications that counts 7.3 million books and 160,000 serials. All publications published in Japan are collected by the legal deposit system. As the only national library in Japan, the NDL preserves publications as cultural assets, compiles catalogues in database and other forms, and utilises them in providing services for the Diet, executive and judicial branches of the Government, as well as the general public. The collection is the major resource for its research service to the Diet and this is its most advantageous point as compared with legislative support organisations of the Houses.

Timely and Relevant Responses

While the NDL as a whole primarily serves the Diet, it has this special department, the Bureau, which assists Committees and Members of both Houses by providing information and research services. The

Bureau, staffed by 160 personnel, answers 30,000 requests a year and prepares a vast amount of analytical reports and articles on many issues. Researchers in the Bureau have so far succeeded in answering the Members' inquiries promptly. The Bureau has been playing a leading role in providing foreign information in particular, as there is not much published material on political, economic, and social systems in foreign countries.

Technological Developments

The Bureau has been making the best use of information technology. The Bureau developed the Total System for Research and Information Services in 1997. It consists of two subsystems: Tracking Request System and Information Sharing System. The Tracking Request System makes it possible to monitor the status of inquiries from the Diet Members, analyse the needs of the Members and the operations of the Bureau, and make use of the results of past research, whereas the Information Sharing System stores the materials and information the researchers found useful for their work and makes them available to the Bureau at large and to the Diet. The Bureau also developed, jointly with the Secretariats of the two Houses, the Full-Text Database System for the Minutes of the Diet, which now contains 1,330,000 pages of the record of the plenary and committee meetings going back to 1947. The database is open to the public through the Internet.

Status

The NDL is independent from the Secretariats of the Houses. The status of the Librarian is equal to a Minister of State, and higher than the Secretaries-General of the House of Representatives and the House of Councillors. The Librarian is responsible for all operations including policy and budgetary issues. As an independent support organisation in the Diet, the NDL serves all Members and Committees of both Houses. The Bureau answers requests on a confidential and nonpartisan basis.

Weaknesses

Resource Pressures

In spite of the increasing number of inquiries from the Diet Members, it is hardly possible to increase the staff of the Bureau. In 1989, the number of inquiries from the Diet Members was 14,661 and after ten years it increased to 29,656. Nevertheless, the number of the staff in the Bureau is almost the same, namely around 160. Therefore, researchers are heavily occupied with research on request and it has become difficult for them to conduct anticipatory studies, taking up issues expected to be debated in the Diet. Such anticipatory studies, which are provided to the Members in the form of publications of the Bureau, have been key services of the Bureau, and the fact that most researchers have little time to prepare analytical reports will affect business.

Staff Recruitment and Turnover

The staff of the Bureau is recruited through an open examination held once a year by the NDL. In addition, there are frequent personnel transfers. Therefore, it takes time for newcomers in the Bureau to become skilled in research activities.

Lack of Personal Contact

The NDL is located apart from the Diet building and the relationship between researchers and the Diet Members is businesslike. The Bureau receives most inquiries by the telephone and fax (and also e-mail in the near future) and answers them by making photocopies of articles, producing research reports, or briefing the Members orally. Perhaps because of their physical location in the Diet, the service of the Secretariats and the Legislative Bureaus of the two Houses seems to be more personal, assisting Members, from beginning to end, in drafting bills or preparing for deliberation in the Committees.

Opportunities

The Mood for Change and Reform

After the non-LDP coalition government emerged in 1993, the newly elected Speaker, Ms. Takako Doi, took the initiative in discussing Diet reform. She set up a consultative group of experts to discuss the enhancement of the functions of the Diet. The group reported in 1996 on the theme how the Members could draw up more bills and reinforce the policy-making power of the Diet. One of the proposals in the report was to strengthen the function of research organisations in the legislature, that is, the Research Offices of the Committees and the Legislative Bureaus of both Houses and the Bureau of the NDL.

Policy Productivity

Since 1993, there has been a chance for every political party to come into power and opposition parties have changed their attitude from merely resisting the government-sponsored bills to presenting their own counterproposals. The number of Member-sponsored bills has gradually increased and more of such bills have become law than before. The Bureau has especially committed to the policy-making process of the Members by analysing the issues and presenting examples from foreign countries.

Technology

One of the goals of Diet reform is to improve access to information on the Diet. The aforementioned Full-Text Database System for the Minutes of the Diet has contributed greatly to this end. The next project is to create a web-site in which the Minutes, Bills and Measures, Legislation, Petitions and Representations, and other information on the Diet are provided in an integrated manner, the information being interlinked.

A Second Base

The NDL will open a new facility in the Kansai region (Osaka-Kyoto area) in 2002 the second major city in Japan? situated 'x' miles from Tokyo?. The functions of the new facility, provisionally called Kansai-kan, are extensive storage of national collections, provision of document supply service, provision of information from Asian sources, library cooperation and R&D in the field of library and information science. The NDL is developing a new system named "Electronic Library Infrastructure System," so that the Library in Tokyo and the Kansai-kan can function as an integrated whole. The information services for the Diet are expected to be enhanced by this project.

Threats

Keeping ahead of the Internet

The Internet has now become a useful and indispensable tool for research activities. Thanks to the NDL's large collection, the Bureau has enjoyed a dominant position among the legislative support organisations of the Diet in obtaining information. But the situation has changed. A vast amount of information is readily available for everybody through the Internet. It will become more important for researchers to have ability to select information, and to be prepared to give further information and in-depth analysis in response to the clients' needs.

Downsizing and Competition

It is widely believed that the Japanese political system ought to be more efficient; in other words, the expenditure of the Government and the number of public servants must be reduced. In this context, a reorganisation of the ministries was carried out in January 2001. There is a possibility that the legislature will be exposed to downsizing pressure in the next stage. If each legislative support organisation is absorbed in differentiating itself from the others and does not cooperate with them, the true objectives of reinforcement of the legislature will give way to a show of streamlining. Cooperation among the legislative support organisations is also needed to make the Diet open to the public. The aforementioned project to create a web-site through which various information from the Diet can be obtained in an integrated manner will be a test of such cooperation.

Conclusion

Japanese politics have entered a period of exciting change. The challenge for the Japanese Research Service is to maintain recognition of the value of its independent services and improve cooperation with other support services of the Diet to make the necessary effeciencies.

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Friends or fences: relationships matter more than structures

Moira Fraser
Parliamentary Librarian
Parliament of New Zealand
Wellington, New Zealand

Parliament

- 120 MPs
- Mixed Member Proportional Representation introduced in 1996
- Strong Select Committee structure
- National & local government
- Unicameral Parliament
- Westminster based

The Library

- Most beautiful library in NZ
- Collection established 1850's
- Over 50 staff
- Legal deposit Library
- Had National Library functions before NL was created in 1965
- Part of National Library from 1965-1987
- Heritage building that has been used continuously for the purpose for which it was built

The Librarian

- Moira Fraser, Parliamentary Librarian, New Zealand

- Appointed January 2000
- Background in leading information services in special libraries in public and private sectors for 15 years
- Previous position as National Director of Knowledge for Ernst & Young

Parliamentary Library, Jan 2000

- Very high levels of customer satisfaction
- Beloved by MPs and seen as a "good thing"
- Increasing emphasis on client services
- Just-in-case collection rather than just-in-time
- Developing desktop resources
- Fledgling research service
- Authoritative
- Impartial

Where are we heading

- Deeper understanding of client needs
- Stronger focus on targeted analytical information
- Expertise in wider range of subjects recognised by clients
- More staff in direct client delivery and fewer staff managing collections
- More desktop resources so that more document delivery is self-service
- A just-in-time approach to collection management

What did that mean

- Restructuring to increase client focus and deliver future capability
- Client liaison programme
- Projects focussed on desktop resources
- Strengthening research capability
- Strengthening subject expertise

Implications for restructuring

- Structures are theoretical
- And then you add people who don't always fit tidily
- But who are absolutely central to your success
- It's important to make a decision and give it a reasonable time to run before assessing it's usefulness

Tensions for Parliamentary Libraries

A one-stop shop where

- we focus on making it easy to do business with us
- all our services are integrated
- one service point which directs customers on
- like a call centre where every customer gets treated the same
- an anonymous group delivering services

A group of experts who

- are differentiated by our areas of expertise
- expect our customers to find out who knows most about which subject
- treat groups of customers differently
- are known individually to our customers

We can be……

- Authoritative
- Impartial
- Reliable
- Credible
- Close to our customers
- Understanding of their needs
- Providers of personalised, targetted information

Outputs of Parliamentary Library

Client Liaison

- Understand client needs
- Training and promotion
- Maori liaison

Responsive Information Services

- Information Requests
- Specialist advice
- Retrieve & supply identified items
- Books/items
- TV/Radio programmes
- ∗Ongoing current awareness of issues
- ∗Ongoing supply of a particular resource

Pro-active Information Services

- Bills Digest
- Background Notes/papers
- Economics & Statistical publications
- Profile bulletins
- Desktop resources
- Electorate profiles
- ∗Links to connected Parliamentary information
- ∗Information packages
- ◊Expand videotape compilations

Information Resources

- Selection
- Acquisitions
- Cataloguing/indexing
- Physical organisation

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More tensions

Aligned by outputs

- Split accountabilities for people between responsive and proactive outputs
- Different work environments and training needs for researchers from reference librarians

Aligned by teams

- Split accountabilities for output across reference and research
- Allocation of work
- Management of central enquiry point

Framework for structure decision

- When thinking about structures what are the most important criteria we use for making decisions?

Criteria

- Improving services to clients
- Administrative convenience
- Staff management

Client relationships

- Most important group of relationships
- How well do we understand their information needs
- How well do we understand how they use information in their work
- What are our clients information gaps
- How can we best fill those information gaps

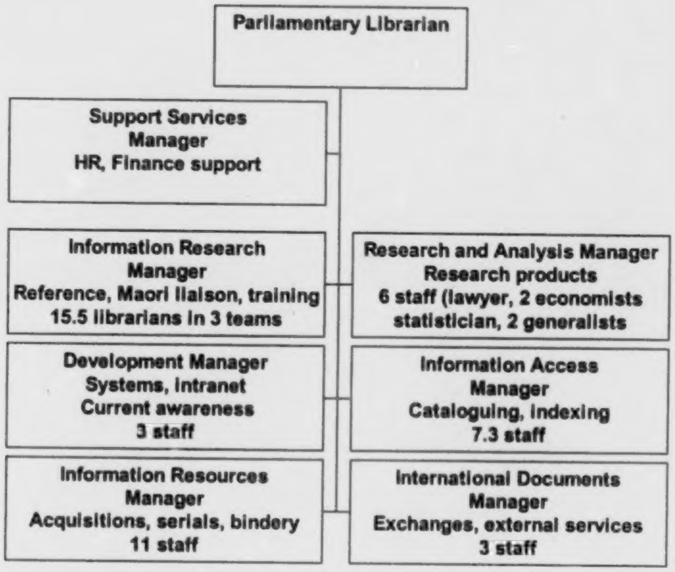
What affected reference/research structure

- Distribution of resources between reactive and proactive work
- What kind of specialists do we need
- Balance of human resources between research services and reference services
- What research products and services do we offer
- Size of the research team

My expectations about structure

- A structure that matched the output diagram
- Too simplistic
- Meant some individuals would report to 2 managers
- Too much change, too quickly
- Still too small for subject based structure

Our solution


Parliamentary Librarian
Support Services Manager HR, Finance support
Information Research Manager Reference, Maori liaison, training 15.5 librarians in 3 teams
Research and Analysis Manager Research products 6 staff (lawyer, 2 economists statistician, 2 generalists
Development Manager Systems, intranet Current awareness 3 staff
Information Access Manager Cataloguing, indexing 7.3 staff
Information Resources Manager Acquisitions, serials, bindery 11 staff
International Documents Manager Exchanges, external services 3 staff

What will happen in the future

- More subject specialisation
- More targetting requires more expertise from us
- More staff in reference & research
- Probably subject teams
- Continue to work on boundaries between reference & research

Structure vs relationships

- What matters most of all is the working relationship between reference and research
- There are mixed accountabilities between reference and research
- Researchers and reference librarians have different cultures and ways of working
- We must seek always to improve how they work together
- The decision we made to separate reference and research may change in the future

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Essential information for post-encyclopaedic parliaments: the Italian case

Giovanni Rizzoni
Chamber of Deputies
Rome, Italy

Introduction

I shall illustrate the experience gained by the Research Department of the Italian Chamber of Deputies over the past few years.

In particular I shall illustrate the major forces which shaped the Department. How it reached its maturity in the early '90s, what pressures towards change were then perceived as a result of the changing role of Parliament in the Italian institutional system. And lastly how the Research Department has endeavoured in last few years to be innovative in the delivery of the services and products offered in response to parliament's new demands for information.

My presentation refers to the Italian case, although it also takes into account the very intense work carried out on the issue of parliamentary information both by political networks (such as the Conference of Speakers of the European Union Parliaments) and by technical networks (such as the European Centre for Parliamentary Research and Documentation). I shall also draw on the results of the OECD survey on Parliamentary procedures and relations based on responses received from legislatures in 24 member countries as well as the European parliament. The survey was presented at the plenary meeting on the Conference of Presidents of EU Parliaments held in Rome in September 2000.

The origin of the Research Department of the Chamber of Deputies.

The Research Department of the Chamber of Deputies began to be organized in its present form in the mid '70s. One of the main political factors contributing to the establishment of the Department was the entry into parliament of new, highly active, minority groups. It was above all these groups that needed for their parliamentary work sources of expertise alternative to those of the government or the large traditional political parties.

The first choice in the organization of the Department consisted in identifying the parliamentary committees as the main clients of the new Department. This choice was consistent with the characteristics of the legislative work carried out by the Italian parliament.

As in most parliaments, the committees are the true driving force behind law-making. In the Italian parliament, this is however true to an even greater degree because of a series of institutional peculiarities.

The Italian parliamentary committees for example have the power to directly approve legislation without the bill being considered on the Floor of the House. This procedure requires a broad consensus (it can be blocked by 1/10 of the members of the House) and is prohibited in certain matters: however, this has not prevented the committees from making extensive use of this opportunity. Nearly 70 per cent of the laws approved by the Italian parliament in the period 1948-1992 were passed using this decentralized committee procedure.

This procedural characteristic, together with other factors, has meant that the degree of modification of bills during the committee stage is very high. There is no bill – even among those of the highest political significance introduced by the government - which is not profoundly amended during its consideration by the relevant Committee. During the first 50 years of the history of the parliament of the new constitutional regime (1948-1992) the parliamentary committees have certainly represented the main law-making centres. They had a nearly complete command of the regulatory context for each new piece of legislation. This was made possible also by the fact that the committees (and the large parties represented in them) had very strong links with both the relevant ministry and with significant interest groups in each sector. This ensured that the vertical integration between ministry, parliamentary committee and interest groups functioned smoothly from the point of view of legislative production. Of course, it also meant a corresponding weakness of the government as a collective institution (via-à-vis the perspective of individual ministries) and a highly sectoralized legislation.

The services and products offered by the Research Department during its first 15 years of activity were an attempt to respond to the operational requirements of the parliamentary committees in that particular context.

The basic organizational features of the Research Department were as follows:

The Department was and still is divided into units, corresponding to the parliamentary committees. Each unit is headed by an official (professional staff member) responsible for that particular sector. Each official has the assistance of two documentalists and one or two persons with secretarial duties. In this structure a key role is played by the documentalists who are responsible for document filing and retrieval (now performed also with the help of databases).

For each bill considered by a committee, the unit prepares a 'bill paper'. This is a volume that in the first instance contains information sheets on the content of the bill. These are accompanied by the text of the regulations relevant to the issue on which the bill is focused. The volume also contains any other type of material considered of interest to the committee discussion (jurisprudence, scholarly opinions, statistical data, etc.).

The file is distributed to all the members of the committee prior to the beginning of discussion of the bill. This wide circulation is of fundamental importance: it means that the Department's documentation activity is politically neutral and available to all parliamentary groups and individual deputies.

As well as producing the bill paper, the Research Department official also attends the committee sittings. Together with the officials of the committee secretariat he/she acts in an advisory capacity concerning the text to the committee chairperson, the rapporteur and all the deputies.

Briefly, the salient features of the Department's activity may be described as follows:

- The main product of the Department (the bill paper) and the advice provided in conjunction with it are related to the individual bills under consideration by the committees.
- The purpose of the file is to allow the rapporteur and the other members of the committee to handle the bill with ease and to modify it as effectively as possible in the context of the existing legislation (by submitting amendments, participating in drafting sub-committees etc.).
- The principal content of the file (and of the related expertise) is thus technical-legal in nature. The aim is to help members of Parliament find the most suitable legislative solution.
- The paper's value added in terms of information thus consists in the technical details referring to each individual bill. The macro-context where each new piece of legislation fits in remains in the background. It is indeed assumed that the parliamentary committee already has a sufficient command of all the contextual data relevant to the decision.

The great changes of the '90s.

Starting in the '90s very important changes occurred in the activity and role of the Italian parliament which led to a profound transformation of the way the Research Department operates.

The following is a brief outline of the most important changes in the political setting.

- The Italian system began to resemble more closely a typically European parliamentary system, with the government playing a fundamental guiding role in parliamentary work. The major factor in this change was the European Union. In order to attain the financial criteria required for joining the EMU (European Monetary Unit) Italy was obliged, starting in 1992, to implement reform policies that were strongly led by the government and had an intersectorial nature.
- In order to implement the sweeping economic and administrative reforms of the '90s, the parliament decided in most cases to confer wide-ranging delegated powers upon the government.
- In the second half of the '90s important reforms were introduced that led to an extensive devolution of power to the regions and the municipalities.
- The privatization of very substantial sections of economic activity previously owned by the State in key sectors of the economy (telecommunications, energy, etc.) led also in Italy to the establishment of independent authorities with strong regulatory powers in their specific sectors.

Due to these sweeping changes the parliamentary committee system and the attendant sectorial legislation lost their central role. The committees were no longer at the heart of law-making. Their position became more 'lateral' with respect to the context in which their activity has an impact. The most important decisions concerning their areas of responsibility were now often taken outside parliament: by the government, by the European Union, by the regions, by the independent authorities.

If the committees and the parliament wish to continue to play an effective role in the decision-making process, they must today show themselves capable of capturing the critical inputs of this process, which often come from outside the parliament. They must naturally be equipped with the right tools to do so - procedural and fact-finding tools.

From the procedural point of view, the Chamber's Rules of procedure were radically overhauled in 1997 with this aim in mind. The rules on the legislative procedure at the committee stage were radically modified to strengthen the channels of interaction between the committees and external players, in the first instance the government.

It became clear that, as a result of these changes and amendments to the Rules, also the activity of the Research Department would have to be fundamentally overhauled. In what way?

The management of the Research Department had to make a series of difficult decisions.

On the one hand, it was clearly apparent that the traditional method of documentation was now inadequate. The provision of a service concentrated on legal and legislative technique now met only to a limited extent the information requirements of parliamentary committees.

On the other hand, it was not reasonable to transform the Department from a centre specialized in legal and legislative technique into an 'encyclopaedic' centre capable of providing directly high quality expertise on all matters of content involved in law-making.

This type of transformation would not only have come up against insurmountable budgetary constraints: it would also have been in conflict with the very institutional logic underlying the reform of the Rules of procedure, namely that the essential information should emerge from a process of interaction and consultation between parliamentary committees, the government and the other relevant stakeholders in that specific sector.

The strategic choice made by the Research Department aimed at attaining an overall integrated innovation of the product and services offered to the parliamentary committees, with unchanged administrative resources. The basic idea was to include as far as possible the documentation activity in the actual legislative procedure at the committee stage, thus making documentation an important piece in the game played by the political actors (government, majority, opposition) in that particular decision-making arena.

As far as the products were concerned, the efforts were directed towards profoundly changing the content of the basic product of the Department - the bill paper or bill file. The aim was to make the file a simpler product. In particular, the ambition to include in the file all the information that might be deemed useful for 'good' legislative action was abandoned. Instead it was attempted to render the file a useful tool for deputies in a committee *to raise questions* on critical points of the bill under consideration.

Has an assessment been made of all the aspects regarding compatibility with EU legislation? Have any of the boundaries of regional and local authority jurisdiction been overstepped? Do any problems exist concerning clarity of the text? On this and other points the file refrains from giving exhaustive answers, but endeavours *to 'prime' the preliminary scrutiny and consultation the Committee must carry out.*

The changes in the file entail considerable change also in the activity of the Research Department official assigned to each parliamentary committee. He is not so much the expert to whom questions must be addressed as, rather, an expert in inter-institutional relations capable organising of the information-related activities of the committees.

In order to organise the fact-finding activity of the committees it is crucial to provide adequate support for the best possible selection of the external players to be heard.

It is no easy matter to tap external expertise effectively so as to make it useful for legislative decision-making. In order to achieve this objective it is necessary to

- devise innovative parliamentary procedures (sometimes adopting ad hoc solutions agreed among all the political parties),
- select the external players to be consulted in such a way as to obtain the best possible mix of technical expertise and different political opinions,
- carefully identify the most appropriate stage for fact-finding activities in the legislative process.

In order to achieve these objectives the Research Department officials work in close contact with their colleagues in the committee secretariats on the basis of the input from the Bureaus of the committees themselves.

Conclusions

One primary aim of the products and services offered by the Research Department of the Chamber of Deputies has thus become to support the committees and other parliamentary bodies in establishing useful contacts with external expertise centres. This is a development that is designed to provide positive support for the transformation process towards a post-encyclopaedic model of parliament.

The birth of modern parliamentary systems was contemporary with that of the great encyclopaedias. In a certain sense, the parliaments purported to be great encyclopaedias of political knowledge. There was no issue that they could not incorporate into the powerful circular system of parliamentary committees.

The common epistemological basis ensuring the possibility of 'closing the circle' ("kyklos") of the parliamentary encyclopaedia was humanistic culture. It is no coincidence that this was the background of the majority of great statesmen of the 20th century.

Today this unifying function of humanist knowledge is no longer. The very model of 'encyclopaedic' knowledge has now been superseded by 'network' models of knowledge that are offered as systems open to constant updating from the outside.

If parliaments continued to be founded on the 'closed' model of the encyclopaedia they run the risk of ending up like the great encyclopaedias of our fathers. At best, they are left on the family bookshelves for purely decorative purposes. At worst, they are simply moved up into the attic.

We must help parliaments to avoid suffering the same fate. It is now fundamental for research departments to actively support the efforts of parliamentary bodies so as to play a leading role in the new open circuits of knowledge.

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The "Disadvantaged" or "Special" Legislator Client: The Parliamentary Research Service's Challenge

Kosi Kedem
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MP Parliament of Ghana
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Introduction

I think the greatest challenge facing a Parliamentary Research Service today is not so much how to cope with the rapid changes brought about by modern information technology. Rather, it is the challenge of how to handle or deal with the problems posed by what I have chosen to call, for want of a better term, the disadvantaged or special legislator. This client, in my opinion, constitutes about 20% of the legislator population in the case of Ghana and that proportion is probably similar elsewhere.

This client is, understandably, "unattractive" to deal with because he is not an ordinary client. He is the Librarian/Researcher's Boss. There is this lurking suspicion that the Researcher might have known about the existence of this client all along but then the instinct of self-preservation might have cautioned him to choose the path of least resistance – that is to pretend that such a client did not exist. This paper wants to confirm his existence and, therefore intends to call for a healthy and dispassionate debate on the role of the Parliamentary Research Service and also help to answer the question on whether Parliamentary Research Services should "lead or follow".

To lead or follow

Some of you may still recall that in 1995, in Istanbul, Dr J R Verrier[1] asked what appeared then to be a provocative question: "The Future of Parliamentary Research Service: To Lead or to Follow?"

It is my considered view that in order to maintain its importance and relevance the Parliamentary Research Services (PRS) must always lead. In other words in the provision of information it should always be steps ahead of the Legislator. Has it any choice in this crucial matter? It is the duty of the PRS to identify the information needs of ALL Hon. Members and try as much as possible to satisfy them. Fortunately I am not alone in this regard as William Robinson and Francis Miko[2] have advanced a more forceful view. According to them "The key to democracy is an effective legislature…In turn, an effective legislature in today's complex world is dependent on information and analysis that permit it to make informed decisions".

Admittedly many PRSs are said to be performing their roles well and according to Philip Laundy[3] have metamorphosed into "a many faceted complex of information-processing operations offering everything from current awareness services to in-depth research".

Notwithstanding this highly rated performance the PRS has an Achilles heel. It is in the form of the problem of the disadvantaged legislator client. This client has not been given the needed attention he deserves. This assertion is amply demonstrated by the various PRS client services evaluation reports. After a detailed examination of some of these reports one is tempted to conclude that the evaluations deal only with services provided to the enlightened or the "normal" legislator clients. The evaluations tend to "focus on understanding the nature and extent of clients satisfaction with PRS".

For the sake of emphasis let me quote extensively from one of the best evaluation reports. That is the "1999 Client Services Evaluation Final Report"[4] prepared by the Department of the Parliamentary Library of the Commonwealth of Australia"

> The evaluation aimed to obtain detailed feedback from Senators and Members and their staff about the extent to which the DPL provides or could provide [certain services].

The findings of the report concluded that there was an overall client satisfaction.

> Senators and Members remain highly satisfied with the service they receive from the DPL. The majority of Senators and Members consider the Library accessible and capable of meeting their individual needs. The Library's speed, flexibility and uncomplicated way it provides information was of particular importance to Senators and Members. Clients appreciated the Library's ability to respond to a wide range of requests for information and advice…

The question, however, is what have these evaluation reports said about the disadvantaged or special client? None of the reports admitted the existence of this client. Neither was it able to identify and solicit feedback from him.

Some characteristics of the special client

Who is this special or disadvantaged client? I guess the answer may vary from Parliament to Parliament depending to a large extent on the conducive information environment prevailing and the cultural milieu in which the legislator operates.

Our special client could be the legislator who either never uses or is unlikely to use the PRS or the Library or has used it once or twice and has since not gone back.

He could be the type of very busy legislator who claims to have no time to spare for the PRS.

He could be the type who, during his previous career, was not exposed to the use of libraries but did his work all right and therefore would normally not see the need to patronise the services.

He could be that not-so-well educated introvert legislator who lacks self confidence and is afraid to expose his shortcomings to the staff.

He could be the type who, even though well educated, has, since becoming a politician, lost enthusiasm to seek information or even read as he used to do previously.

He could be that type of lawmaker who is physically disabled and is supposed to use a disable-friendly PRS.

He could be that back-bencher who only warms the bench and scarcely contributes to debates in the house and therefore has no need for information.

He could also be the type of legislator who having used the traditional library or PRS for most of his life is now confronted with a Parliamentary Research Service packed with electronic facilities and devices.

He could be the sickly type who spends a considerable amount of his time looking after his health.

He could be the type who is just allergic to libraries or suffers from bibliophobia etc.

What can be done?

A rough attempt has been made to draw a sketch of the disadvantaged legislator client who could now possibly be recognised by most of us. The problem, as I see it, is that he has all along been taken for granted or even ignored for obvious reasons. The Library or the PRS, in my view, should exist to cater more for the disadvantaged client than the enlightened one. After all, if a person knows the value of information he will not need much prompting to satisfy his information needs. This is however not true in the case of the disadvantaged client who, in fact, will lose his right to vital information if the PRS does not go to his aid. In other words such a Legislator may not be equipped to make informed decisions.

"To win over a disadvantaged client has always needed some missionary zeal".[5] It could be a tough, costly and time consuming job for the PRS taking cognisance of the fact that one is dealing with a responsible, independent adult with a high societal profile, and, of course one's boss – so to say. Nevertheless this paper would like to put forward the following suggestions to serve as a basis for further discussion:

1. Parliamentary Libraries & Research Services should now admit openly that there exist disadvantaged legislator clients
2. They should try to identify these clients and cater for them.
3. They should carefully assess their needs and interests and offer "customised" services.
4. They should try and find out the "focus" of the client and address it. Dr J R Verrier[6] describes the client focus thus, "politicians are at once Parliamentarians…legislators, Party functionaries…constituency minders; and minders of the reputation of the Parliament/Party…". The PRS should therefore determine what the client's focus is and assist him to overcome his difficulties.
5. They should provide well programmed user education.
6. They should encourage personal interaction (especially interviews and one-on-one briefs in addition to providing subject related policy papers.
7. They should maximise the use of their SDI facilities.
8. They should put in place carefully thought out monitoring evaluation and feedback mechanisms mindful of the sensitivity of information collected and of the status of those involved.

9. They should maintain a personal profile or "dossier" on each client without being seen to be acting the "detective" or the spy.
10. They should make it possible for the client to experience that pleasant phenomenon described as serendipity.
11. They should make use of peer influence especially legislators who serve on the Library Committee.

It is very important to maintain the respect and dignity of the client and scrupulously respect his right to make choices in the course of implementing the above suggestions. It is being suggested here that the disadvantaged client should be "pampered" but then making sure that he is not spoilt.

How to walk this tight rope depends on the professional skill and the ingenuity of the Librarian or the Researcher.

Conclusion

This paper has attempted to establish the existence of the disadvantaged legislator client. Having done that, the more difficult job of "converting" him is left to the professionals in the field. It must be noted that this client is found in varying degrees in all the PRS categories established by William Robinson and Miko,[7] to wit – the "rubber stamp" legislature, the "nascent" legislature the "informed" legislature and the "Independent" legislature.

Finally, let me suggest that Parliamentary Libraries or Research Services should conduct special research into this subject with a view to laying a scientific basis for it.

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[1] J R Verrier, *The Future of Parliamentary Research Services: To Lead or to Follow,* Paper prepared for the IFLA Conference, Istanbul, August 1995.

[2] William Robinson & Francis Miko, *Parliamentary Development Assistance in Central Europe and the Former Soviet Union, In Legislative Studies*. pp. 409-428

[3] Philip Laundy, *Parliamentary Librarianship in the English Speaking World.* London: The Library Association.

[4] Department of Parliamentary Library (of Australia) by ARTD Management and Research Consultants and the Albany Consulting Group *1999 Client Services Evaluation Final Report*. Canberra, Australia, 1999.

[5] Kosi Kedem, *The Need for a National Library for Effective Management of Information Systems for Development.* Paper presented at a conference to mark the Golden Jubilee of the Ghana Library Board, La Palm Royal Beach Hotel. Accra. Sept. 2000.

[6] J R Verrier op. cit. pp.12 "Politicians are at once parliamentarians (representatives, committee members, communicators, policy developers, executive trainees etc), constituency minders (dignitaries, glorified welfare officers and speech makers) and minders of the reputation of the Parliament/Party (public relations agents for themselves and their profession)."

[7] William Robinson & Francis Miko. op. cit., pp409-428

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One of a Kind: Parliamentary Information and Research Services for Parliamentarians - An Australian Senator Tells

Rosemary Crowley
Senator
Parliament of Australia
Canberra, Australia

Introduction

I've called this paper "One of a kind" because in my experience in the Australian Federal Parliament, we have a unique library and research service. I've never met anything to match it in the many libraries I've visited and or used in my lifetime.

Before I give you some of my personal experience to address our terms of reference I want to first note that not all parliaments are privileged to have access to a parliamentary research service or, even in some cases, to a well resourced Parliamentary Library. If we argue as I do that Parliamentary Libraries and Research Services are a vital ingredient in holding the Executive of Government accountable to the people, through Politicians and Committees, i.e are a vital part of Democratic Government, of Democracy itself, then this conference may need to consider ways in which it can assist the establishment of such services in all our Parliaments.

Australia's democracy, I am very pleased to report, is of the robust - or even rowdy -kind. And for a combination of reasons, including strong support from both major political parties, there has been encouragement to allow our Parliamentary Library and its Research Service to develop the kinds of services which assist parliamentarians do their job even as the demands on them become so much greater.

Multi functional Politicians

I arrived in Parliament in 1983 and I have therefore had some few years in which to test the systems. For 13 years I was a member of the Government, for the last 5 years in Opposition. My use of the Parliamentary Library changed considerably from government to opposition.

Over these 20 years, the world has seen the introduction of the computer and ready access to a complete overdose of information. In the face of that avalanche of data, the Parliamentary Library and its Research Service have become more important than ever.

Whereas once, politicians might have sought a paper outlining basic facts about an issue, they now seek a filtering and analysis of that data.

Over this same period, politicians arriving in our Parliament are much better educated than our earlier colleagues and therefore much better able to cover the basic facts of an issue. But the analytical critique of the surplus-to-need data remains as important as ever, if not more so.

Parliamentary research staff who live and work in Parliament House have learned to be aware of the necessary variety of our politicians and their roles. The staff see us primarily as legislators, to some degree as representatives and as policy makers or potential policy makers. However, especially if we are members of the House of Representatives in an unsafe seat, we are also at the beck and call of demanding constituents. The way in which we are likely to use the information and research services of the Department of the Parliamentary Library (DPL) is likely to be different, from one MP and Senator to the next.

To cope with these differences, the Parliamentary Library staff have started in recent years, personal visits to each politician, to better know them and their needs. At the same the politicians get to know their information and research specialist staff.

To help us perform our legislative role, staff in the Law and Bills Digest Group (in consultation with subject experts elsewhere in the research service), prepare Bills Digests, which virtually all Senators and Members in the Australian Parliament rely on to understand legislation, including its background and political context.

Bills Digests complete the circle of information available to Senators and Members on legislation, which includes the bill itself, the relevant Government Department's Explanatory Memorandum and the relevant Minister's 2nd reading speech. The purpose of the Digest is to summarise the bill's proposals and point to what the bill will do and what it will not do. The Digest may also provide some policy context and it may suggest possible consequences of the bill being passed into legislation.

I understand that a recent visitor participating in our inaugural Inter Parliamentary Study Program was aghast at the forthright position taken in the Australian Bills Digests. Senators and Members, however, take for granted that forthright position.

Such is the strong all party support for the services of the Australian Parliamentary Information and Research Service, and so strong its commitment **not** to promote the policies of either the government or the opposition, or indeed of anyone else, that the occasional mild discomfort its independent advice may cause the government of the day, is tolerated. After all, today's government may well be tomorrow's opposition!

In our role as Parliamentary representatives, research analysts brief us for overseas travel and for meeting overseas or domestic representatives. They may also perhaps assist us write that head-turning, or eye opening address for the local High School's Speech Day, assist us clarify policy, or rights or entitlements in the case of inquiries from constituents. In the case of those on the front bench, where I was privileged to be, as Minister for Family Services from 1993 to 1996 and for some of that time as Minister Assisting the Prime Minister for the Status of Women, independent advice is sought firm the Research Service from that being offered by the Minister's Department. Or, if we are on the Shadow Front Bench, i.e. aspiring to be ministers, we seek out the library and research staff to assist us develop policy options, consider policy alternatives and explore international parallels for appropriate models, and to critique Government policy.

They also assist us with the routine tasks of being a politician e.g., at the time of writing, Sir Don Bradman, great Australian Cricketer had just died and the library provided C.V. and background information to help us to speak in condolence motions.

They also assist us develop our special interests, one of which in my case has been the issue of the position of women in parliament. It gives me great pride to note at this, the Centenary of Australia's Federation, that Australia, and my own home state of South Australia in particular, have led the world on the issue of full franchise for women. In 1894 women in SA got the right to vote and stand for Parliament. In 1902 that right to vote and stand for Parliament was extended to all Australian women, but Aboriginal men and women were excluded. It took more than 60 years for Aboriginal people to gain that right.

We have not made sufficient inroads into women's representation, notwithstanding that my party, the ALP, with success in the recent by-election in the seat of Ryan in March this year, has met its affirmative action target for women in the Federal Parliament one year ahead of schedule.[1]

However, we have put different issues on the political agenda that would not have been there without us. Perhaps the best example of this, that I was involved with, is that when a Labor Government came to office in 1983, there was a Women's Policy Agenda, *'Towards Equality'* which included 42 policy initiatives. Among the most significant of these was the great Sex Discrimination legislation, along with the *Women's Budget Statement*, which required all government departments to report on the gender breakdown of expenditure in portfolios – how much was spent specifically on women and women's issues.

In all of this, our job is to be the politician and not the academic. However we must not look academically foolish and thus we want and need to be able to rely on high quality, independent and impartial advice, delivered in a useable fashion.

I mentioned earlier the flood of information confronting politicians. There is another challenge and that is the demand for legislation in areas where previously the law was silent – e.g. environment protection, human organ transplants, genetic modification, ethics of cloning. These are just a few of the issues that put great pressure on politicians who have to understand these whole new areas, often in short time, so they can make informed decisions when they vote on the legislation. The Parliamentary Library and Research Services are critical in assisting the politicians by providing them with background briefings and information.

From my position on the Joint Library Committee of the Parliament, I have learnt that there are many and varied ways in which staff of the DPL access information, including reliance on getting accurate factual and publicly available information from Departments of Government.

Last year saw an extraordinary challenge to this particular source which caused widespread and cross party concern. The outrage of politicians from across all parties at the threat to the independence of the library and its advice meant a satisfactory resolution was rapidly sought and found. This issue, which I understand will be dealt with more fully by Dr Verrier in her introduction to the Workshop on *Managing the Political Environment* later this week, above all illustrated the strength of commitment on all sides of politics to the availability to all parliamentarians of an independent, objective, confidential, timely and high quality source of advice in order to effectively carry out their many and varied responsibilities.

Committee Dependence on Parliamentary Information and Research Services

There is a good deal in the literature about the contribution which committees make to assist Parliaments hold the Executive to account.[2] This is because committee hearings and reports, and the government's response to those reports is, in the main in the public domain. It is interesting to note that the contribution of Parliamentary Information and Research Services for individual politicians is necessarily confidential for the vast majority of work that they do, and therefore does not get the same publicity.[3]

This is not usually the case for work done for committees. While Australian Parliamentary Committees are generously resourced by many standards, there is a need for ongoing assessment for how best to service these extensive committees. By definition, staff of committees, who, of necessity work on a great range of inquiries, cannot be experts on every subject. This is where the staff of the DPL comes in. And I know that this is why Dr Verrier commends the Canadian Parliamentary model which has formalised committee support from the Research Service and has sought to develop informally something comparable in Australia.

I would like to refer to two inquiries of the Senate Community Affairs References Committee which I chair, both of which could not have achieved the same result without access to the expertise of both parliamentary information specialists and analysts:

Healing Our Hospitals

The objective of this inquiry was to examine the state of Australia's Public Hospital System, the stress on the system and the circumstances which have given rise to unacceptable waiting lists in Australia's hospitals. In summary its Terms of Reference were to examine how hospital services may be improved, including the adequacy of current funding and options for reform.

The Committee made 42 recommendations, addressing each of the inquiry's nine terms of reference. Recommendations were made in four key areas:

- an urgent immediate increase in funding from the Commonwealth to be matched by the States and Territories;
- an end to the fragmented funding of health programs and the commencement of a new era of inter-governmental cooperation;
- a move to open reporting of funding and performance against national standards and;
- a focus on improving the quality of care through the use of new information technologies.

In this case, because of the expertise which the DPL had, and the Committee did not, an expert from the Parliamentary Research Service, Paul Mackey, was seconded to the Committee for a total of more than three months, to assist the inquiry and the writing of the reports. He brought to the Inquiry specialist skills, particularly in the areas of health policy and financing and Federal-State health relations not otherwise available to the Committee. The placement was also a model of best practice in cooperation in the Parliament between its different elements (there are five separate Parliamentary Departments), in this case between a Senate Committee and the Information and Research Service staff, so that all the resources of the Parliament were focussed on best outcomes for the Parliament.

While the government has yet to respond to this report[4], the Committee confidently expects that its deliberations will be taken into account in the development of policy in this extraordinarily complex context of contemporary government.

Inquiry into Child Migration

For its inquiry into Child Migration, the Senate Community Affairs Reference Committee needed to understand the circumstances in which it was possible 'to dispose of children by deportation' i.e. to send British 'orphans' to Australia. What was the relevant legislation and what was the social context which created it? What have been the changing attitudes to children which eventually brought this practice into disrepute and how did legislation change to reflect it? The revelations were startling.

DPL has assisted in revealing the background and vital history and in the analysis of the huge amount of material resulting. What it can't do, however, is tell the 'on-the-spot' story. The Committee has held public and in camera hearings around Australia and made an unprecedented visit to the UK and Canada in April to discuss the issues with the agencies, governments and families of those affected. At the time of writing, the Committee is finalising its report with a view to tabling it in the very near future.

The Significance of access to DPL expertise on conscience votes

In the case of conscience votes, or free votes, when Party Policy does not apply, or even in the case of private members' bills, there is a greater dependence than usual on the assistance of the Information and Research Service. Examples include the difficult but important issues of the termination of pregnancy, family law, euthanasia and even, in 1964, on the fluoridation of Canberra's water. In these cases where each politician has to make up his and her own mind, the skills of the Parliamentary Library Staff are stretched to the limit to provide comprehensive briefing material across all sides of the issues.

Conclusions

Two questions were suggested by the Chair for papers in this session to address, namely:

1) whether parliamentary research services are evolving to meet the ever more complex requirements of their clients, and

2) whether there is anything unique in the kinds of services delivered by parliamentary research services,

The answer, in the case of the Australian experience, is a resounding 'yes' to both questions and I hope that the foregoing has contributed to making this case. As issues have become more complex and timescales even tighter, there is no doubt that the professional expertise of the staff of the Parliamentary Information and Research Service in the Australian Parliament has stretched and grown - and certainly has risen to the challenge! The sophistication, as well as the breadth, of the work now done for Senators and Members is quite extraordinary.

Similarly, what parliamentary staff do, that academics, interest groups and others do not do, is present the material or the briefing in the way that takes account the personal preferences of each and every Senator and Member. We call it having extraordinary 'parliamentary nous', or 'thinking as we do' or 'understanding the heartbeat of the parliament'. And this, I propose, is unique to those of us who live on 'the hill'.

On the last part of the question, namely whether this strength is well enough recognised to ensure the survival of parliamentary information and research services in a competitive world is perhaps a more difficult question in an environment of declining resources and a trend to outsourcing.

Being valued therefore, which our Information and Research Service is by all Senators and Members, is critical. Perhaps attention should be given by those of you responsible for the management of these critical resources, to achieving greater public recognition of the very important role you all play.

Two suggestions:

Firstly, if it does not exist, establish a Parliamentary Library Committee with parliamentarians on the committee, it is very useful in our Parliament. The politicians get to understand the range and amount of work done, the cost of it, the importance of defending it and of securing an appropriate budget for it.

Secondly another way to get publicity and support for our Parliamentary Library and Research services is to 'out' the work that they do. For example I sought assistance from the library to establish a Timeline for 6 Billion People day. The Library produced a chart which was displayed in the public viewing area of the Parliament. So successful was the display chart that there was unprecedented demand for copies, and consequential publicity for the Parliamentary Library.

Recently, at a morning tea to mark the passing of one of the earlier and visionary Parliamentary Librarians, Allan Fleming, it was instructive to note that in his plans to create the Legislative Research Service parliamentarians needed, he said that such a service would amount to 'democracy in action'.

He was and is right!

As this paper has described, the flood of information, the demands of rapid decision making, and representing the constituents views in new and complex areas, mean that our Parliamentary Library is more important than ever before in assisting parliamentarians in this tough call of maintaining democracy in action.

The very thought of the huge challenges that lie before parliamentarians in the 21st Century demands that, in any logical and democratic world, there must be a case for the maintenance and continuation of the very specific, very applied, very parliamentary, information, analysis and advice that we now take for granted in the Australian Parliament.

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[1] The ALP's 1994 affirmative action plan said women must fill 35% of seats needed to form government by the year 2002 and not less than 35% will be filled by men in 2002.

[2] The Committee system in the Australian Parliament expanded significantly in 1970 when the Senate established seven Legislative and General Purpose Standing Committees and five Estimates Committees. In 1987, the House of Representatives introduced its own comprehensive system of General Purpose Standing Committees. In 2001, there are more than forty committees, comprising Senators, Members of the House of Representatives, or both from a parliament with a combined membership of 224.

[3] Approximately 25% of the work of the Australian Parliamentary Information and Research Service is publicly available in the form of the briefs written on issues judged to be of interest to all Senators and Members and this is to be found at its website on www.aph.gov.au

[4] Guidelines suggest that the Government must respond to Committee Reports within three months of tabling though this is more honoured in the breach. This Report was tabled on 7 December 2000 and awaits a response.

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Information literacy: a whole school reform approach

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Students today need to be more information literate than ever in this digital age. Particularly since information crowds cyberspace, often unfettered, the need for students to access authentic and useful resources, as well as interpret and apply those findings, becomes of paramount importance.

Realizing that need, the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology (AECT) developed a set of information literacy standards for student, published in the 1998 volume *Information Power*. A year later, the International Society for Technology in Education (ISTE) published overlapping technology standards for students. Certainly, standards-based education has become more popular since it facilitates assessment, including cross-institutional comparisons. Theoretically, it offers a well-grounded basis for instruction.

However, it is one thing to have standards and another to implement them. For the latter to occur, schoolwide commitment and action are needed. For significant student achievement to occur, systematic and research-grounded work must be conducted and evaluated. The following action research case study provides a model for such implementation.

A Brief Overview of Action Research

While John Dewey used this kind of systematic examination, action research is associated most closely to the Teachers College of Columbia University in the 1940s. The main idea was to give teachers an empirical way to improve practice. Action research may also be considered as a cycle of inquiry, whereby: 1) the present situation is analyzed, 2) questions are raised, 3) factors are identified, 4) solutions are proposed, 5) interventions are developed and measured, 6) data are gathered and analyzed, and 7) new questions are posed.

Action research provides a reasonable way to improve student achievement as well as educational practice. Particularly when variables are hard to control, action research at least provides a systematic approach and encourages reflective decision-making.

Demographic Background

Redwood High School, the site of the action research, is a suburban, comprehensive high school which began implementing site-based management in 1992. It enjoys a strong academic record and a supportive community. As their accreditation self-study indicated, the student population is becoming more diverse in terms of background and academic-social needs; about 85% are Caucasian (of which about 11% are Middle Eastern), with Latino and Afro-Americans composing a growing percentage of students. In addition, an ESL and extensive special education services broaden the school's scope.

At the point of the research effort in 1998-1999, the library offered over 30,000 print resources and over 80 magazine subscriptions for all curricular areas (as well as elibrary). Fifteen student computer workstations were networked to provide access to CD-ROMs, software and the Internet. Others accessed the library's catalog, supported stand-along applications and special education needs. Instruction has been content-embedded, and several teaching aids complemented verbal help.

Need for Information Literacy Action Research

As the school became a leadership school in the Bay Area School Reform Collaborative (BASRC)[1], a focused effort was defined: assessment and means to help students meet district outcomes (reading, communication, and mathematics to begin with). For instance, starting with the class of 2002, students must meet a reading outcome: "Read and analyze material in a variety of disciplines." The class of 2003 must meet a technology outcome: "Using technology as a tool to access information." The focus was a response, in large part, to existing low reading scores in district testing. In meeting those outcomes or standards, there was a real recognition of students at risk, with the intent of providing resources and services to meet their needs. The library was a vital part of that effort.

Several faculty members and the library staff noticed problems students experienced in accessing and evaluating information. Student research questions were sometimes vague and under-developed; groupwork in the library was sometimes inefficient. Teachers noticed a rise in student plagiarism; students voiced their frustration with assignments. Although a scope-and-sequence of library skills was approved five years earlier, it was not "owned" by the faculty or carried out systematically. A Redwood study group (Research Strategies Study Group--RSSG) was established, cochaired by the library media teacher (the author) and a science teacher. Representatives from the different academic departments and student body participated in the research, and acted as liaisons to facilitate all-faculty support and education. The group's goal was ambitious: *to improve student information literacy competence through*

- developing a repertoire of research strategies
- critically evaluating information
- synthesizing and sharing information in creative, meaningful ways
- incorporating technology into the literacy process.

The group then identified two major research questions:

- What information skills do students need to demonstrate?

- What interventions will improve student skills?

Determining Information Skills

First, the group had to identify what students needed to know and be able to do. The timing was auspicious, with the AASL standards being developed simultaneously on the national level. Additional, the library media teacher spearheaded a literature review to ascertain the latest findings about information literacy and instruction. The group relied heavily on the California School Library Association book *From Information Skills to Information Literacy,* Michael Eisenberg and Robert Berkowitz's Big6 efforts, Colorado Department of Education's work on information literacy standards, the Kansas Association of School Librarians Research Committee study, and the Oregon Educational Media Association's information literacy standards. Using Putman Valley's extensive list of standards and ERIC, the group was able to track down numerous efforts on student information literacy.

The library media teacher created a binder of research and professional readings on information literacy, to which the group referred during and after the study. As the group analyzed the data, patterns emerged. They developed a categorized "inventory" of information literacy skills based on AASL and other standards aligned with district outcomes. The list was then validated by using a modified Delphi method. Faculty, students and library staff examined the list and modified it as deemed appropriate. The department and student liaisons facilitated the process, modifying the list from the first round, and continuing the review until consensus about the items and categories was reached. At a faculty in-service workshop, the Research Skills Inventory List was approved.

Assessing Present Skills Levels

Based on the approved list, the group could then assess the present level of student information literacy to create a baseline for comparison. They used a number of evaluation tools to triangulate results. Library staff observed classes doing library research, noting the level of expertise exhibited for the different competencies. Faculty and students rated present skill attainment by grades. The co-chairs examined student work in alignment with the list. Their findings refined earlier observations; some of the specific areas that needed work included:

- evaluating Web sites; determining the quality and credibility of information
- using specialized reference books
- varying search strategies according to the task at hand
- comparing different sources on the same topic
- using graphic organizers
- writing research papers in a systematic way
- citing sources correctly
- creating annotated bibliographies
- avoiding plagiarism.

The process also brought up the most apparent question: Why did gaps in literacy exist? The next step was to assess the present level of instruction for required courses (since all students had to meet outcomes and needed to share certain instructional experiences). Again, classes were observed – in terms of information delivered. The co-chairs performed content analyses on the assignment handouts, highlighting the explicitly-stated research skills and noting the assumed implicit research skills needed to successful complete the tasks. Each faculty member independently examined the skills list, and noted in which required class an assignment:

- used the skills (expected that students already knew it)
- included a handout or involved a brief discussion about the skill
- included classtime instruction about the skills.

Simultaneously, student focus groups did the same task. They had a hard time remembering which class included the skill, so instead the students identified at which grade they thought they learned the skill. As with the faculty, different students had different experiences. Occasionally, a student would remind a peer about a particular assignment where a skill was used. This kind of interaction pointed out the need for group processing – and the limits of regression over time.

Students brought up the fact that they had learned several skills in middle school. Therefore, feeder school librarians were brought into the research process. The credentialed library media teachers reached a consensus about which skills to address, although additional skills might be taught beyond the minimum standards. In a follow-up meeting with non-credentialed librarians, those minimum skills were not systematically addressed, although they agreed to include them thereafter. As a side finding, GPAs of the feeder school students were analyzed, and those schools having a credentialed librarian graduated students who performed better their freshman year at high school.

The data were analyzed across sections of the same course (taught by different teachers), across grade level and across department as well as within grade and department. In some cases, variances in instruction were significant within courses; in other departments a clear sequence of skills instruction and practice were observed. Where variances occurred, the department chair used the data to help calibrate instruction, at least within the same course.

The Whose Problem is It?

Students needed to improve their skills. They needed to learn them and practice them. Teachers also needed to improve their instruction (and assignments) in these areas, and they needed to coordinate their efforts within and across disciplines. The library media teacher needed to make sure those information literacy skills were coordinated – and taught in research assignments. At another faculty meeting, these gaps were discussed, and possible interventions were brainstormed.

Based on that discussion and on the data analysis, the study group identified the following tasks to best meet the study's goals:

- develop a scope-and-sequence instruction across the curriculum on information literacy
- develop assignments that precluded plagiarism
- develop and institute standard research and citation models
- develop curriculum and instructional aids to help students become information literate.

Developing Research Products

Both teachers and students loudly wanted guides to help them in the research process. The library media teacher (LMT) took the lead to develop the following products.

Standardized bibliographic stylesheets. Updated guidelines were the greatest needed item, according to teachers. Consulting MLA and APA print and online documents, the LMT developed one-sheet guidelines for each, using generic layout and an example for each source medium. Study group members reviewed and pilot-tested the guidesheets, and modified them accordingly. It was noted that a sample bibliography was found useful as an exemplar for students. All faculty agreed to use one of the two styles for assignments, and the sheets were posted online on the library's Web page.

Research process and product rubrics. The school was using rubrics routinely, and another action research group was developing a set of rubrics to evaluate oral presentations. Using the Kansas study and the California English teachers' work, RSSG developed, pilot-tested, and approved two complementary rubrics associated with research. (Faculty could not come to consensus about one all-inclusive rubric, so process and product were dealt with separately). Even issues of scale (1-6) needed to be ironed out; the 6-point scale was used to align with most other Redwood rubrics. Because plagiarism was such a big issue at the school, an explicit mention of that practice was included in the rubric; students couldn't get a passing "3" if resources weren't cited or if plagiarism was evident.

Research handbook. A little-used handbook from the 1980s existed, but desperately needed updating. While the English department was approached to update their old guide, it was decided that the LMTs should spearhead this effort. The Redwood LMT took the lead, aligning the research steps to the school's new list and to the AASL standards. RSSG reviewed and modified the handbook as they pilot-tested it. Students also gave valuable feedback, including thoughts about wording, which was incorporated into the final product. A supplemental teacher's guide was also created to help faculty instruct students in research processes. RSSG made sure that the handbook could be used as a "consumable" workbook, and that students and teachers could take one page/step of it as a research process focus worksheet. The final version was given to all faculty and students, and was posted on the library's Web page for easy access at school and home.

Library Research Web page. The need for a stable library Web page focused on research aid became apparent. Documents needed to be posted, and students needed Web "jumpstarting" as they researched. Up to that point, the library kept Rolodexes of Web sites, and would bookmark individual machines with starter URLS; such practice was inefficient at that point. Beyond the typical information about the library, the site incorporated the research products listed above, and provided Webliographies for various departments and their assignments. A separate listing of professional Web sites was developed for teachers (http://www.rhsweb.org/intro). As the subject-specific Webliographies became popular, departments that had not used the library for research much, started asking for the same services – and their students used the library more as a result.

Teacher Education and Coordination

The first step in teacher coordination involved a faculty in-service workshop where all members reviewed the findings of the instructional "mapping" of research skills. Using a color-coded list (based on department practices), the faculty as a body was able to negotiate grades, departments and courses in which specific instruction and assignments would occur. Only one gap remained after the process, videotaping, and that practice occurred in most foreign language classes. (English took on this skill informally.) In some cases, skills were incorporated in several courses, so teachers decided who would take the lead and who would reinforce the learning. Because of this explicit coordination, faculty trusted their colleagues more to share the "burden" of information literacy, and to depend on their practice to help students progress faster and deeper.

A separate in-service workshop was given to help faculty evaluate Web sites, and to construct plagiarism-proof assignments. Teachers were provided several plagiarism Web sites, a list of typical topics (AIDS, Michelangelo, environment, Steinbeck, etc.) and given a simulation to do in small cooperative groups: "Pretend you're a high school student who needs to write an acceptable research paper in 30 minutes." The teachers had fun, and realized how important it was to evaluate resources and to craft assignments that drew upon higher thinking skills.

Another faculty in-service workshop focused on rubrics, folding into the other action group's work. Teachers saw how the process rubric, in particular, could be used with students at the beginning of their freshman year to self-diagnose information literacy skills and to develop a plan for self-improvement along those lines.

Assessing the Results

How well did the plan work? The same assessment methods were used at the end of the semester as were used one year prior for the baseline. Among the findings were the following:

- Assignments included clearer and more explicit language about information literacy skills.
- Assignments within in the same course were more uniform.
- Great use was made of the research guides by students and teachers.
- Classes of students asked more higher-level questions when doing research.
- Web site evaluation was taught explicitly in the freshman computer course, and practiced in that grade's science and social studies assignments.
- More attention was made to research process along with research product.
- More students completed research assignments, and work was more solid.
- Reading skills improved.
- Resources were cited more often and more accurately.
- Less plagiarism was evident.
- The LMT was more involved in the research process, including the assessment of research products.

Several outcomes furthered the action research results beyond original expectations. Faculty communicated more within and across department lines. Special education teachers became more involved in the process – and accepted into the school's governance structure. Technology was incorporated to a greater extent into the curriculum. Feeder schools worked more closely with Redwood High School; at least one feed school made information literacy a priority because of Redwood's efforts. Parents became interested in the project, and the LMT gave a workshop for them on Internet use.

At the end of the first year of action research, the following questions arose:

- How can more thorough and standardized assessment be conducted?
- How can data be disaggregated to a greater degree with more impact?
- How can coordination of research and instruction between departments be optimized?

Plenty of work remains in this ongoing effort. The trick will be to sustain reform efforts over time.

Impact of the Action Research

This action research project was effective for several reasons: 1) it grew out of teacher-perceived need; 2) the effort was student-centered; 3) classroom teachers partnered with the LMT, and took leadership responsibility for the product and impact; 4) the entire faculty was involved throughout the process, and "owned" it.

The presence of a schoolwide reform effort and district outcomes provided impetus and administrative support (including a period off for the co-chair). The high-profile of rubrics within the school made it easier to construct and use them. Having national AASL standards and research studies on hand gave the action research credibility. Creating a simple-to-use Web research page, with quick updates, has broadened access to research sources both within the school and at home. The incorporation of technology also strengthened faculty interest in improving their skills and infusing technology into classroom practice. More multimedia projects are being developed, for example, and the school was poised to develop their Digital High School proposal.

By using action research methods, Redwood High School was able to reflect professionally and systemically about student achievement and educational best practices. In terms of library media programs, action research provided the objective credibility that was needed for teachers to "buy" into information literacy. Moreover, the research led to practical products that helped students and teachers become more information literate. Truly a win-win situation that can be replicated in other settings.

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1. *BASRC is a multi-million dollar educational project sponsored by the Annenberg Foundation and the William and Flora Hewlett Foundation. BASRC's mission is to "help schools across the region to engage in a comprehensive transformation process to become thoughtful, caring communities with a common purpose and a commitment to the growth and learning of all children and adults." Over 100 schools in the San Francisco Bay area have participated in this five-year reform effort from 1996 to 2001.*

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Observation des pratiques informationnelles des professeurs de collège français : contribution pour appréhender la multidimensionnalité de la recherche d'information enseignante

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Résumé :

Avec la démultiplication des organisations documentaires et bibliothéconomiques, l'émergence des réseaux technologiques, la professionnalisation des professeurs, à quoi ressemble actuellement la recherche d'information de l'enseignant de collège français ? Au regard des dernières recherches publiées et à l'aide d'une enquête menée depuis 1997, comment peut-on envisager la recherche d'information, en tenant compte du cadrage institutionnel, du profil des acteurs, des types d'information recherchés et de l'essor des technologies de l'information et de la communication ? Se dessinent progressivement de nouvelles missions au sein de l'établissement scolaire pour le documentaliste-bibliothécaire.

1- INTRODUCTION :

1.1- Préambule :

Avant même d'entrer dans le vif du sujet, il me semble nécessaire, lorsque l'on choisit de traiter et d'analyser une problématique liée aux pratiques informationnelles des usagers, de préciser un ensemble de points, tels que :

- le **contexte documentaire du système éducatif français.** Depuis déjà la fin des années 50 la priorité était de mettre à disposition dans tous les établissements scolaires du second degré[1], un espace documentaire théoriquement à destination de l'ensemble des membres de la communauté éducative et des élèves, actuellement baptisé Centre de Documentation et d'Information (C.D.I.), et, depuis 1989, un personnel enseignant certifié en Documentation officiellement baptisé Documentaliste-Bibliothécaire[2].
- **à la périphérie de l'établissement**, à des distances plus ou moins importantes[3], des centres de documentation spécialisés, appartenant au réseau du Centre National de Documentation Pédagogique (C.N.D.P.)[4] mettent à la disposition des enseignants de toutes disciplines un ensemble de documents sur support traditionnel, numérique et à distance via le web[5]. A ce dispositif, s'ajoutent notamment les

bibliothèques municipales, les bibliothèques universitaires, les fonds documentaires d'associations disciplinaires et/ou pédagogiques, les centres de recherche spécialisés dans les domaines de la recherche-(action) en pédagogie[6].

- d'autre part, l'objet d'étude présenté concerne bien **la recherche d'information(s)**[7] à considérer dans une acception bien plus large que la seule recherche de documentation. Nous pourrions dire que toute information est une connaissance communiquée, en constante confrontation au capital individuel de savoirs, qui ajoutée à d'autres informations constitue une ossature de références communes entre membres d'une même communauté de savoir (les enseignants dans notre étude), renvoyant enfin à un ensemble de pratiques professionnelles personnelles observables[8]. L'information recherchée par les enseignants renvoie à un ensemble de critères agrégés comme la temporalité, le degré d'utilité, le caractère brut ou traité, la nature du support[9].

1.2- Problématique :

Nous nous sommes demandé à quoi ressemblait actuellement la recherche d'information des professeurs exerçant en collège, celle-ci leur permettant à la fois de préparer la classe, de réactualiser leurs savoirs professionnels et plus généralement de se tenir informés de l'actualité de la recherche pédagogique et disciplinaire ? Quels peuvent être les éléments incontournables à prendre en compte afin de considérer au plus juste ces mêmes pratiques, sans présupposés, lorsque l'on décide d'appréhender celles-ci de manière réflexive ? Enfin, quelle place occupe le C.D.I. en tant que structure documentaire de proximité et à quelles attentes exprimées par les enseignants les (nouvelles) missions des documentalistes-bibliothécaires gestionnaires des fonds documentaires de l'établissement devraient-elles répondre ?

1.3- Méthodes mobilisées :

Nous avons utilisé un cocktail de trois méthodes différentes, afin d'essayer d'appréhender la complexité du problème. D'une part, l'enquête quantitative qui a été faite, auprès de 325 professeurs des sept principales disciplines d'enseignement[10] répartis sur l'ensemble d'une région française[11], d'autre part, pour les 34 collèges retenus, un entretien semi-directif de chaque documentaliste-bibliothécaire, et enfin, l'étude de contenu d'un corpus composé de l'ensemble des textes officiels produits par le Ministère français de l'Education nationale traitant de la documentation scolaire de 1950 à nos jours. Parallèlement, nous avons tenté d'observer les évolutions, les facteurs dynamiques de la recherche d'information, en considérant sans a priori l'ensemble des pratiques déclarées puis constatées, avec des va et vient incessants auprès de diverses structures et dispositifs de fourniture d'information. Le cadre théorique de référence utilisé a été l'analyse systémique, nuancée par une approche communicationnelle de type « sémio-contextuel »[12]. En effet, nous avions présupposé que chaque enseignant développait au cours de sa carrière professionnelle des « contextes spécifiques d'usage de l'information », dépendant notamment de facteurs endogènes personnels prédéterminants, et de l'environnement composé d'éléments exogènes structurels et organisationnels. Nous parlerons alors d' « **écosystème informationnel** », considérant des acteurs ayant chacun une « histoire de vie », un environnement facilitateur ou pénalisant, mobilisant des stratégies et des processus de recherche dépendant de l'environnement et développant des actions souterraines compensatoires. Au delà de toute idée de dépendance vis-à-vis du seul C.D.I. de l'établissement scolaire, on peut imaginer un tuilage d'actions complexes de ces acteurs afin d'accéder à l'information, en constante adaptation en fonction de l'environnement, d'où la notion d' « écosystème ».

1.4- Constat sur les dernières études menées sur ce sujet :

La lecture de nombreuses recherches menées ces 15 dernières années sur les pratiques documentaires des enseignants français suscite de notre part cinq remarques principales :

- Le **faible nombre de recherches** sur ce sujet : l'une des conséquences est que nous avons affaire à de très nombreux présupposés sur le rapport entretenu par les enseignants avec l'information, sans qu'il y ait eu des recherches de fond menées autour de problématiques précises. On entend d'ailleurs tout et son contraire sur les pratiques informationnelles des enseignants[13].

- Une très forte séparation dans les approches entre les études menées **sur la recherche documentaire et celles menées dans le domaine des technologies de l'information et de la communication** (T.I.C.). En France, dans le domaine de la recherche d'information, les T.I.C. sont observées davantage comme moyen d'accès aux informations que comme mise à disposition de nouveaux contenus, ou de nouveaux dispositifs d'échange, de mutualisation, plus largement de communication entre spécialistes de l'éducation[14].
- La tendance des années 90 en matière de recherches et de publications dans le domaine de la documentation scolaire étaient à un certain déterminisme par des **discours plutôt militant, précheur, catalyseur** en occultant les dysfonctionnements et certaines formes de dérives pouvant interpeller les professeurs sur leurs pratiques informationnelles ou le documentaliste-bibliothécaire sur ses missions et son rôle au sein des établissements d'enseignement. A cette période régnait un modèle de C.D.I. centripète, où le fonds documentaire matériel mis à disposition demeurait la référence en matière d'accès à l'information, et oligopolistique dans le sens où la démonstration des documentalistes-bibliothécaires en arrière-plan était de convaincre les membres de la communauté éducative que le C.D.I. restait l' « offre centrale de documentation ». Nous parlions alors non plus de Service de documentation, mais de Centre de Documentation, de C.D.I. comme « cœur de l'établissement », ou du C.D.I. comme espace central de l'innovation pédagogique, avec petit à petit, un glissement du tout documentaire au tout pédagogique[15].
- Les études interrogeant les pratiques documentaires des professeurs observaient les problématiques au travers d'une **grille d'analyse héritière de la pratique et de la sociologie de la lecture**, et moins en terme de prélèvement d'informations, d'imprégnation, de construction de stratégies individuelles reposant souvent sur des hypothèses de travail sans cesse corrigées. La plupart de ces études comptabilisaient le nombre de prêts de documents par enseignant auprès de telle ou telle autre structure, la part de livres possédés à titre personnel, le dernier ouvrage lu intégralement.
- Enfin, l'enseignant n'était considéré dans certaines recherches que **comme interface, relais d'informations, destinées à l'élève**, et moins considéré comme un acteur professionnel à part entière, ayant des besoins d'information variables en fonction bien entendu de projets pédagogiques à mener avec/pour les élèves mais aussi pour lui, dans le cadre d'une réactualisation permanente de ses savoirs professionnels, de nouveaux objectifs professionnels, … D'où des glissements idéologiques très rapides, élaborant des corrélations hâtives selon le principe que les enseignants se documenteraient mal, insuffisamment, avec des objectifs systématiques d'immédiateté, et autres. Des expressions aussi fortes que « l'illettrisme enseignant », de « lectures reportées à plus tard … » ont alors été utilisées par certains de nos pairs.

En guise de transition à cette première partie, l'on peut certainement considérer que des tendances collectives révèlent des pratiques informationnelles confirmées ou émergentes, complexes car combinées les unes aux autres, devant vraisemblablement nous interroger sur de probables redéfinitions des fonctions du C.D.I. et de certaines missions des documentalistes-bibliothécaires, responsables de telles structures.

2- APPREHENDER LA MULTIDIMENSIONNALITE DE LA RECHERCHE D'INFORMATION :

2.1- Principe n°1 : « Considérer le contexte institutionnel » :

Le contexte institutionnel dans lequel évolue chaque acteur peut notamment être appréhendé par l'étude des textes officiels. Ces derniers sont particulièrement importants dès la première année de professionnalisation, car ils définissent le cadre dans lequel vont évoluer les professionnels de l'éducation ou de la documentation. Par la connaissance et l'assimilation des contenus, chaque acteur définit ses domaines d'intervention, les limites à ne pas dépasser pour être en phase avec ses pairs et l'institution, et lui permet d'auto-évaluer les domaines mal maîtrisés qui nécessiteront entre autre des remises à niveau, des compléments d'information, des mises à jour, à savoir un ensemble de stratégies d'action calculées.

L'étude des textes officiels français liés à la documentation et à l'information scolaire ont principalement révélé deux idées majeures :

- petit à petit sur une quarantaine d'années, nous avons assisté à un glissement de la documentation destinée exclusivement au personnel enseignant vers une documentation mise à disposition au C.D.I. essentiellement pour les élèves. Dans les derniers textes des années 80-90, le professeur n'est plus représenté, ni considéré comme un professionnel ayant des besoins informationnels spécifiques, nécessitant que le documentaliste-bibliothécaire intègre ses divers besoins dans sa politique d'acquisition et d'information. L'enseignant évoqué dans les textes, ne serait qu'à la recherche de documents ou d'information à fort ancrage disciplinaire, directement utilisables avec les élèves.

Nous avons d'ailleurs constaté des pratiques professionnelles du documentaliste-bibliothécaire en parfaite adéquation avec l'esprit des textes. L'enseignant n'est pas considéré aux yeux du professionnel de la documentation scolaire comme un professionnel nécessiteux d'informations professionnelles. De plus, le C.D.I. n'est pas envisagé, par ces mêmes documentalistes, comme un espace participant à la réactualisation des savoirs professionnels, didactiques, … des enseignants.

- Les contenus des derniers programmes d'enseignement[16] et les quelques textes officiels disciplinaires liés à cette problématique, malgré des différences d'une discipline à l'autre, font régulièrement mention de l'importance de l'information dans les pratiques d'enseignement et d'auto-formation, mais sans pour autant se référer en particulier au C.D.I. et au documentaliste-bibliothécaire. D'ailleurs, les situations présentées comme illustrations de la recherche d'information sont des échanges entre le maître et les élèves, ou entre pairs (de préférence de la même discipline d'enseignement). On assiste à un recentrage sur la discipline, incitant à penser l'information sans collaboration affirmée avec le documentaliste-bibliothécaire.

Pour finir ce point, il ne nous semble pas excessif de parler d'un contexte institutionnel plutôt scissionniste que catalyseur entre enseignants et documentaliste-bibliothécaire.

2.2- Principe n°2 : « Considérer les positions respectives des acteurs » :

Des facteurs endogènes individuels semblent particulièrement influençants pour comprendre le volume, les type et nature des informations recherchées, qu'elles soient liées à l'actualité de la profession ou à l'exercice du métier. Au cours de notre recherche, quatre facteurs endogènes ont semblé particulièrement déterminants :

- **le degré de responsabilité professionnelle** : le fait de faire office de professeur principal, d'être responsable de projets pédagogiques, ou coordinateur disciplinaire au sein de l'établissement, responsabilisent l'acteur aux yeux de ses homologues et de la direction de l'établissement, et agit de manière conséquente sur l'activité et la fréquence de la recherche d'information.
- la **participation à des activités de formation continue**[17]: être acteur de la formation amplifie le volume et la variété des recherches d'information . Celles-ci portent quasi exclusivement sur l'émergence de nouveaux concepts ou de nouvelles questions, sur les dernières orientations en matière de politique d'éducation, ou sont centrées sur la recherche de productions d'auteurs de référence. Pour nuancer ce critère-là, il faut toutefois souligner que la participation à des activités de formation produit des effets sur la recherche d'information à moyen terme (5 années) au début de cette nouvelle expérience professionnelle. Au delà, on note une stabilisation de l'usage voire un retour à des pratiques informationnelles antérieures à l'expérience de formation continue.
- l'**ancienneté dans l'établissement** : contrairement à une idée préconçue très développée dans le milieu professionnel de la documentation scolaire, les plus jeunes enseignants (en âge et/ou en expérience professionnelle) ne sont pas les plus forts usagers du fonds et des services du C.D.I. ou des structures documentaires environnantes. Avoir une démarche active de recherche d'information suppose une stabilisation de sa propre situation professionnelle[18]. La recherche d'information pédagogique et professionnelle devient au fil de la pratique, une activité jugée nécessaire par les acteurs, mais non prioritaire pour autant.
- l'**intégration à la dynamique pédagogique de l'établissement** : au cours de nos rencontres avec divers enseignants d'un même collège, nous avons observé que pour les équipes pédagogiques les mieux soudées, avec des projets précis, une programmation établie, un responsable du suivi,… les recherches d'information étaient plus nombreuses, avec des démarches partagées entre les acteurs auprès des diverses structures documentaires et bibliothéconomiques de l'environnement. Parallèlement, au sein de ces équipes, se développent des embryons de spécialisations disciplinaires et/ou transversales par enseignant, où chacun d'eux recherche de l'information pour ensuite la diffuser auprès des pairs, par des actes de communication mutuelle, à l'occasion des temps de concertation notamment. Pour conclure ce point, on peut dire que bien

qu'étant un acte individuel, la recherche d'information est fortement influencée par le contexte professionnel quotidien, qu'est l'établissement scolaire.

2.3- Principe n°3 : « Considérer le contexte écosystémique informationnel» :

La recherche d'information revêt chez l'enseignant de multiples dimensions en lien les unes aux autres. Rares sont les professeurs ne faisant appel qu'à une seule structure ou utilisant en priorité les fonds et services du C.D.I. pour leurs divers besoins d'information. Un professeur utilisant peu le C.D.I. d'établissement n'est pas forcément sans stratégies de recherche d'information. D'ailleurs, le système de représentation[19] du documentaliste-bibliothécaire des besoins informationnels de l'enseignant est faussé, car celui-ci repose exclusivement sur les documents et les informations liés à la pratique de la classe, devant servir en priorité à mettre en action le document autour d'un objectif pédagogique inscrit dans les programmes d'enseignement disciplinaire ; alors même que la recherche d'information du professeur, aux vues des pratiques, est une démarche complexe, correspondant à des actes pédagogiques variés, regroupant des sources et des organismes documentaires multiples, avec des fréquences d'usage variables, comprenant de nombreux types de documents et d'accès, impulsée par des acteurs aux profils variables. L'écosystème documentaire du professeur est constitué principalement de quatre types différents de recherche d'information, avec par ordre d'importance[20]:

➢ l'**information culturelle et de loisir (I.C.L.)** :

- *-Définition* : Seule information généraliste qui ne soit pas spécifiquement destinée aux enseignants, puisque s'adressant à une population élargie en quête de connaissances culturelles dans le cadre généralement des loisirs. Les cibles sont par conséquent plus nombreuses, avec des contenus généraux et un degré de précision davantage lié à une problématique restrictive qu'à un contenu scientifique spécialisé. L'I.C.L. ne trouve d'intérêt pédagogique qu'à partir du traitement opéré par le professeur lui-même ou le documentaliste-bibliothécaire.
- *Type d'actions* : ces recherches d'information ne sont pas assorties d'une volonté d'action immédiate. L'utilisation de ces informations dans des situations pédagogiques se fait par transfert, progressivement, sans souvent qu'il y ait eu volonté à l'origine de la recherche de l'utiliser ultérieurement dans un contexte d'enseignement. Ces informations constituent des « strates de connaissances » pouvant être ensuite réutilisées partiellement dans diverses situations en cours de carrière professionnelle.
- *Type d'informations* : exclusivement de type encyclopédique, culturel et patrimonial. Aucune d'entre elles n'a un caractère pédagogique ou didactique. Les contenus à ancrage disciplinaire sont plutôt de type vulgarisation scientifique, historique, littéraire, etc.
- *Structures de référence* : l'I.C.L. est disponible dans la plupart des structures culturelles et de lecture publique. Trois types de bibliothèque ont été prioritairement cités : les bibliothèques municipales, de quartier pour les zones urbaines ou les bibliothèques départementales de prêt[21] en secteur rural.
- *Fréquence de recherche* : régulière, puisque plus de la moitié de notre échantillon de recherche, déclarait aller dans ce type de structure plus d'une fois par mois. La motivation n'étant pas que personnelle, mais souvent familiale (demande des enfants, du conjoint, …).
- *Forme* : Il s'agit exclusivement de monographies sur support traditionnel.
- *Acteurs sollicités pour la fourniture* : les acteurs centraux fournissant l'I.C.L. sont les personnels de bibliothèque. On note aussi quelques collègues d'établissement, appartenant au même champ disciplinaire.

➢ l'**information pédagogique et professionnelle (I.P.P.)** :

- *-Définition* : il s'agit d'informations produites en priorité par divers éditeurs scolaires et de l'éducation, auxquelles s'ajoutent les instructions officielles. L'I.P.P. participe à la réactualisation des savoirs professionnels et contribue à la fourniture d'informations utilisables dans les pratiques pédagogiques, permettant de définir le cadre des actions, les obligations et les orientations à donner aux enseignements.
- *Type d'actions* : exclusivement ce qui attrait aux pratiques de classe, à la didactique, et aux cadrages des contenus en respectant les directives du Ministère.

- *Type d'informations* : l'I.P.P. se compose essentiellement de fichiers ressources, de manuels scolaires, de guides méthodologiques, de recueils de textes officiels, et de programmes d'enseignement.
- *Structures de référence* : les organisations du réseau C.N.D.P., les services d'information des Rectorats et Inspections académiques, quelques sections de bibliothèques universitaires dans le domaine des sciences de l'éducation. Le C.D.I. de l'établissement d'exercice fournit certains types d'I.P.P., orientées autour de la pratique en classe avec les élèves (exploitations immédiates de l'information) et la littérature de base dans les domaines des instructions et programmes officiels.
- *Fréquence de recherche* : la démarche la plus régulière (au moins une fois par mois) l'est auprès d'un centre appartenant au C.N.D.P. Pour les autres organisations externes, les consultations sont rares (une à deux fois par année scolaire en moyenne). Concernant le C.D.I., les sollicitations sont régulières (deux fois par mois minimum) mais exclusivement pour consulter et emprunter des manuels et documents exploitables avec les élèves. Les enseignants tendanciellement se plaignent du manque d'investissement des C.D.I. et des documentalistes-bibliothécaires dans la fourniture d'I.P.P. les obligeant à chercher ce type d'information en dehors de l'établissement.
- *Forme* : l'I.P.P. est proposée essentiellement sur support papier. On retiendra cependant la part conséquente occupée par les documents vidéos et numériques (avec les cédéroms essentiellement).
- *Acteurs sollicités pour la fourniture* : ce sont exclusivement les documentalistes scolaires, qu'ils exercent en C.D.I. ou bien dans le réseau C.N.D.P. ; parfois des professeurs relais de l'établissement, comme les responsables de discipline, ou les coordinateurs de projets pédagogiques.

Nous avons remarqué que l'I.P.P. était accessible d'une autre manière que nous qualifierons d' « invisible » par le biais de fonds documentaires personnels conséquents[22]. Cette « valise documentaire » est « *établie par celui qui la possède en fonction de ses besoins. Elle contient les documents nécessaires à l'accomplissement quotidien de sa fonction dans l'institution* »[23]. Cette information est là en complément des déficiences des fonds documentaires du C.D.I., et a été acquise, après échange sur les contenus, avec des pairs.

➢ **l'information scientifique et technique (I.S.T.)** :

- *-Définition* :. Elle permet à l'enseignant d'opérer des choix, d'observer ce qui est fait ailleurs, dans d'autres domaines professionnels que le sien et sur d'autres territoires. Le contenu est particulièrement scientifique et s'adresse à un public de spécialistes, pas forcément pédagogues.
- *Type d'actions* : la recherche d'I.S.T. a souvent une motivation plus large que la seule recherche d'amélioration de l'exercice du métier. Les enseignants chercheurs et usagers de l'I.S.T., sont souvent eux-mêmes en situation de recherche (pour achever un cycle universitaire, obtenir un diplôme, ou passer un concours d'enseignement comme l'agrégation).
- *Type d'informations* : il s'agit principalement d'articles scientifiques et de références bibliographiques.
- *Structures de référence* : principalement les bibliothèques universitaires et les services en ligne sous forme de banques de données spécialisées.
- *Fréquence de recherche* : les recherches d'I.S.T. ne s'effectuent que lors de moments particuliers, durant la carrière professionnelle. A ces moments-là, les recherches sont fréquentes et répétées. Le reste du temps, les recherches d'I.S.T. sont rarissimes sauf chez les enseignants en histoire-géographie et en sciences.
- *Forme* : elle se caractérise par une forte part de dématérialisation. Les rares formes matérialisées de l'I.S.T. ne le sont que pour des périodiques spécialisés ou des bulletins[24].
- *Acteurs sollicités pour la fourniture* : très peu de professionnels participent à la recherche de ce type d'information. La recherche est directe entre l'enseignant et les divers gisements, sans médiateur professionnel. Seules quelques bibliothécaires de services universitaires accompagnent les recherches de ces professeurs.

➢ **l'information scientifique et expérimentale (I.S.E.)** :

- *-Définition* : L'I.S.E. a la particularité d'être le plus souvent disponible au sein de structures universitaires et scientifiques. Elle rend compte de l'état de la recherche francophone et internationale et permet d'observer de nouvelles orientations, de nouvelles problématiques émergentes de la recherche pédagogique et disciplinaire.

Elle prend souvent la forme de littérature grise non diffusée chez les principaux éditeurs de l'éducation, ni sur les sites scientifiques institutionnels. Ces recherches fondamentales sont assorties de programmes d'expérimentation auprès d'élèves, où sont mis en confrontation des éléments scientifiques explicatifs supposés et l'observation du terrain. L'I.S.E. possède souvent un double niveau d'écriture associant des chercheurs et des enseignants praticiens.

- *Type d'actions* : L'I.S.E. a une action innovante, et essaie dans l'idéal de modifier les représentations et de proposer de nouvelles perspectives modifiant à terme certaines pratiques professionnelles d'enseignement[25]. C'est aussi par le biais de l'I.S.E. que l'on voit émerger de nouveaux concepts faisant ensuite autorité dans le champ de l'éducation.
- *Type d'informations* : un double niveau de publications réflexif-fondamental associé à des expérimentations, des compte-rendus de séquences pédagogiques, des carnets de bord tenus par des pédagogues, des grilles d'aide à l'observation, …
- *Structures de référence* : Des laboratoires universitaires de recherche, certaines associations professionnelles, et surtout des Instituts de recherche pédagogique comme les Instituts Universitaires de Formation des Maîtres (I.U.F.M.) [26], l'Institut National de Recherche Pédagogique (I.N.R.P.)[27] ou des Instituts de recherche disciplinaire[28].
- *Fréquence de recherche* : A la différence de l'I.S.T., la recherche d'informations scientifiques et expérimentales est régulière et permanente au cours de la carrière de l'enseignant. Ces contenus intéressent particulièrement le praticien, intégré dans son métier, n'ayant comme principales motivations que de mieux comprendre sa pratique et l'améliorer dans sa quotidienneté.
- *Forme* : exclusivement des publications dont les maîtres d'œuvre sont les Instituts eux-mêmes, sous forme de périodiques et de contributions à diffusion confidentielle, et diverses formes de littérature grise (papier et/ou en ligne). La difficulté de ces publications réside dans les conditions artisanales de diffusion et souvent le non respect des normes de publications.
- *Acteurs sollicités pour la fourniture* : les acteurs diffusant l'I.S.E. sont les mêmes que pour l'I.S.T. La seule différence fondamentale concerne quelques échanges, repérés en cours d'enquête, entre certains enseignants en établissement scolaire et des enseignants-chercheurs, se communiquant des références bibliographiques, lorsque ceux-ci sont associés dans une recherche appliquée. Pour ce type d'information, le chercheur est agent de transmission et de conseils informationnels.

2.4- Principe n°4 : « Considérer le contexte technologique » :

Autant une part significative de l'I.S.T et de l'I.S.E a été, dès l'origine, uniquement disponible en ligne par accès télématique, puis par l'Internet, autant l'I.C.L. et l'I.P.P. restent encore principalement distribuées sur supports traditionnels ne nécessitant pas un usage systématique des Technologies de l'Information et de la Communication (T.I.C.). On constate toutefois, une situation informationnelle se compliquant particulièrement depuis 1997 environ. La plupart des fournisseurs de l'I.P.P. notamment ont développé un véritable marché de l'offre en ligne, avec souvent des informations pédagogiques et professionnelles exclusivement sur les réseaux, non proposées en version papier, complémentaires à l'édition traditionnelle qui continuent de se maintenir parallèlement. Cette situation rend complexe la notion même d'écosystème informationnel qui se dématérialise de plus en plus. On assiste à un « superpositionnement informationnel » nécessitant un travail de lecture, de repérage et une certaine maîtrise des technologies s'ajoutant aux méthodologies jusqu'alors utilisées par les enseignants. Face à la croissance considérable de ces offres d'information dans le système éducatif français[29], les discours institutionnels ou de la documentation scolaire auraient tendance à être « inflationnistes », car au cours de notre enquête, on constate que peu d'enseignants consultent et ont une démarche systématique de recherche d'informations sur l'Internet, à la différence notamment des usages (conséquents) des services sur télématique. Cette tendance est lourde, puisque constatée quels que soient les types d'établissement, le profil professionnel des enseignants, leur discipline d'enseignement,… De plus, les quelques enseignants ayant intégré ces pratiques n'ont pas pour autant écarté les recherches d'information dans les périodiques papier, les déplacements dans les structures documentaires et les bibliothèques. Nous avons bien affaire à un principe d'accumulation des usages et non pas de substitution. L'un des effets est que se dessine peu à peu un noyau d'enseignants hyper-informés, possédant un écosystème élaboré, combiné et complexe se démarquant des autres, conservant des usages traditionnels de la recherche d'information (lecture, déplacements dans les centres documentaires et les bibliothèques,…).

3- POUR CONCLURE : ENVISAGER L'EVOLUTION DES FONCTIONS DU C.D.I. ET DES MISSIONS DU DOCUMENTALISTE-BIBLIOTHECAIRE :

La présentation générale des principaux contextes permettant d'appréhender la recherche d'information de l'enseignant de collège ainsi que le thème retenu par la section « Bibliothèques scolaires et centres de ressources », à savoir les « Bibliothèques scolaires : faire la différence dans l'éducation » nous amène à nous interroger sur de nouvelles dimensions qui pourraient voir le jour afin de positionner le C.D.I. et les documentalistes-bilbiothècaires au sein de l'écosystème informationnel type de l'enseignant. Trois tendances principales se dessinent, en complément de ce qui se faisait jusqu'à présent dans les établissements scolaires :

- Développer un pôle de **veille-experte éducative**[30] à destination des professeurs :

L'activité de veille, susceptible d'être en phase avec les pratiques informationnelles des professeurs observés, reposerait sur les principes de surveillance du marché de l'édition scolaire, éducative et de recherche en éducation, de recueil d'éléments d'information. Elle faciliterait une prise de décision collective au sein de l'établissement afin d'acquérir de tels contenus, de définir des priorités d'acquisitions et de consultations. Cette organisation collective et partagée de la recherche d'information permettrait de la structurer au sein de l'établissement et de l'inscrire dans le cadre d'une politique documentaire concertée entre les pairs où chacun serait impliqué dans les choix opérés. Jusqu'à maintenant les orientations reposaient essentiellement sur le documentaliste-bibliothécaire, voire les professeurs coordinateurs de discipline. Ces activités de veille seraient à combiner à celles de pré-expertise nécessitant dans l'absolu, une combinaison d'opérations assurées par le documentaliste-bibliothécaire (recherche, collecte et diffusion de l'information brute) puis par l'enseignant de discipline davantage concerné et compétent pour les opérations spécialisées que sont notamment l'analyse et la validation des contenus. Enfin, cette organisation partagée se terminerait ultérieurement par la mise à disposition des membres de l'équipe enseignante d'une information critique de seconde génération. Par conséquent, parler de veille-experte suppose la constitution d'une « chaîne d'acteurs » dont la finalité est de mettre à la disposition des élèves des produits d'édition, en phase avec les objectifs d'enseignement, disponibles sur le temps de classe et en dehors (au C.D.I. notamment) tout en conservant une mémoire de ce travail de veille réutilisable par d'autres enseignants à l'occasion de nouveaux projets.

- Inclure dans les missions du documentaliste-bibliothécaire une mission de **médiation informationnelle** :

La médiation informationnelle pourrait être au carrefour de l'information potentiellement disponible et de la construction par les enseignants de connaissances de référence intégrables dans les moments collectifs de pratique de classe ou les moments individuels de réflexion sur la pratique professionnelle. Les enseignants rencontrés reconduisent souvent des pratiques anciennes voire obsolètes car ils éprouvent les pires difficultés à identifier les nouvelles offres informationnelles susceptibles de les intéresser. Or le documentaliste-bibliothécaire est fortement souhaité, comme possible médiateur entre l'écosystème d'un côté et la communauté enseignante de l'autre. La médiation informationnelle porterait notamment sur l'aide à la formulation des questionnements afin d'optimiser l'efficacité des recherches, l'aide à la sélection des résultats, des propositions d'intégration de ces mêmes informations dans les pratiques d'enseignement, voire l'aide à la réécriture de celles-ci pour les rendre accessibles aux divers auditoires. Cet accompagnement multidimensionnel redéfinirait fondamentalement les missions et actions actuelles du documentaliste-bibliothécaire, et le positionnerait dans l'établissement scolaire, plutôt comme un médiateur « méthodologue de l'information ». On constate alors un glissement progressif de la seule fourniture d'information vers une aide à la recherche et au choix de l'information, nécessitant avant tout une bonne connaissance de l'offre informationnelle potentielle de l'environnement et des profils individuels de chaque enseignant de l'établissement.

- Considérer la **formation mutuelle** au sein de l'établissement :

Enfin, la veille-experte et la médiation informationnelle devraient être accompagnées de micro-dispositifs de « formations mutuelles », à l'échelle de l'établissement, où seraient transférés aux enseignants susceptibles d'être intéressés l'état des questionnements et les constats faits par ceux s'étant confrontés à une recherche d'information spécialisée. Ce principe-là bien que séduisant nécessiterait d'accroître les temps de concertation dans les établissements hors temps de classe. Afin d'éviter la reconduction de recherches déjà menées, former les pairs aux résultats de celles-ci dégagerait du temps pour optimiser les temps de veille et de médiation informationnelle.

Pour finir cette intervention, force est de constater que de telles orientations autorisent à faire un ensemble de remarques :

D'une part, le C.D.I. vraisemblablement va évoluer peu à peu vers une fonction de relais entre le professeur et l'environnement et de catalyseur des compétences informationnelles de chaque enseignant.
D'autre part, parler de documentation et de documents nous semble trop exclusif et limité face à la typologie d'information qui semble se dessiner. Il serait plus juste de parler d' « informations situées » par rapport au profil professionnel et à l'histoire de vie de chaque enseignant, par rapport au type d'établissement et aux enseignants qui le composent, enfin, par rapport à la réalité de l'environnement à savoir les structures documentaires et bibliothéconomiques de proximité, l'offre d'accès à l'information, l'état de l'I.P.P. et de l'I.C.L. notamment, …

Enfin, nous ne pouvons plus considérer un seul type de système d'information ou un seul profil d'usager dans la problématique de la documentation scolaire. On assiste bien à un certain éclatement des usages où des approches déterministes et uniformes ne peuvent plus rendre compte de la réalité protéiforme et complexe des pratiques de recherche d'information des enseignants.

NOTES DE BAS DE PAGE :

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[1] Les établissements scolaires du second degré regroupent les collèges, les lycées d'enseignement général, technologique et professionnel ; les élèves sont répartis en âge de 11 ans à 18 ans environ.

[2] Le dernier texte officiel de référence pour la profession est la Circulaire n°86-123 du 13 mars 1986 intitulée « Missions des personnels exerçant dans les centres de documentation et d'information », Bulletin officiel, n°12 du 27 mars 1986, 4p.

[3] Le distance maximale est généralement de 80 kilomètres environ.

[4] Le C.N.D.P. a une mission nationale, relayé régionalement par le Centre Régional de Documentation Pédagogique (C.R.D.P.), départementalement par le Centre Départemental de Documentation Pédagogique (C.D.D.P.), voire localement par le biais d'antenne nommée Centre Local de Documentation Pédagogique (C.L.D.P.).

[5] Cf. www.cndp.fr notamment

[6] L'Institut National de la Recherche Pédagogique (I.N.R.P.) par exemple. Cf. www.inrp.fr

[7] La recherche d'information renvoyant davantage à l'étude du processus, alors que la recherche d'informations intègre en sus les résultats de la recherche, des typologies de documents et de produits d'information, etc.

[8] Cf. notamment à ce propos, les derniers travaux de Claude Baltz.

[9] Ces deux derniers critères dissocient notamment l'information à la documentation.

[10] Disciplines étudiées : Lettres modernes, mathématiques, sciences (sciences et vie de la terre et sciences physiques), histoire-géographie, éducation musicale, éducation physique et sportive et langues vivantes (anglais , espagnol).

[11] Il s'agit de la région de Basse-Normandie composée de trois départements, le Calvados, l'Orne et la Manche d'une superficie de 17600 km^2, comportant notamment des zones urbaines denses et des secteurs ruraux fortement enclavés, peu dotés en structures documentaires spécialisées.

[12] Cf. les éléments bibliographiques ci-joint, notamment les travaux d'Alex Mucchielli. Parmi les contextes retenus, on pensera au contexte expressif des identités des acteurs, le contexte des positions respectives des acteurs, le contexte spatial.

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[13] Par exemple, les plus jeunes générations de professeurs seraient les plus actives et motivées pour chercher de l'information pour les uns. A contrario, des écrits intègrent l'idée de constructions progressives de la recherche d'information au fur et à mesure de la carrière et de la spécialisation de l'acteur supposant dès lors une maîtrise plus étendue et plus conséquente en fin de carrière professionnelle.

[14] On dénote par exemple, peu de travaux de recherche en France sur l'approche méta-communicationnelle des listes de diffusion, forums,... destinés aux professeurs, ou sur l'émergence de nouvelles formes d'organisation de la communication dans le cadre de dispositifs pédagogiques innovants (Travaux croisés en collège, Travaux personnels encadrés en lycée,...).

[15] Quelques titres de publication révélateurs : « Le C.D.I. au cœur du projet pédagogique »(1991), Hachette ; « Le C.D.I. : un tremplin pour l'innovation (...) » (1987), C.D.D.P. de Tours ; « Rôle et enjeux des C.D.I. dans l'innovation pédagogique en région Rhône Alpes Académie de Lyon » (1998), E.N.S.S.I.B.

[16] Notamment les derniers programmes d'enseignement au collège intitulés « Enseigner au collège : [discipline] : programmes et accompagnement ». C.N.D.P., 1999.

[17] Participation en tant que formateur ou en tant que responsable de l'économie de la formation.

[18] Il est relativement fréquent que les premières années de professorat se soldent par une succession de remplacements dans divers établissements ou des postes d'enseignement obtenus pour une seule année scolaire.

[19] On pourra retenir comme principe incontournable du système de représentation, la « *circulation des représentations au niveau logique collectif, outre leur présence au niveau logique individuel* » J.-C. Sallaberry. La représentation en questions. Spirale, 1997, hors série n°2, p.11-29.
Numéro intitulé « Représentations en formation ».

[20] Cf. schéma joint en Annexes intitulé « L'écosystème informationnel du professeur de collège », 1 p.

[21] Les bibliothèques départementales de prêt (B.D.P.) développent des services à destination des communes rurales les plus enclavées, sous forme de prêts de fonds documentaires pour des périodes déterminées, en accord avec les municipalités locales.

[22] En moyenne près de 200 documents professionnels, constitués de monographies et de quelques titres de périodiques.

[23] Fondin Hubert, Rechercher et traiter l'information, Paris : Hachette, 1992, p. 126.

[24] Comme les bulletins de l'Institut National de l'Information Scientifique et Technique (I.N.I.S.T.), ...

[25] Quelques dimensions de recherche de ces dernières années : la modification des apprentissages par le biais des technologies de l'information et de la communication, les évaluations, la construction de la citoyenneté, la gestion mentale,...

[26] Les I.U.F.M. possèdent des équipes de recherche associant des enseignants-chercheurs d'I.U.F.M., des professeurs et équipes d'universités et des enseignants d'établissement associés : équipes pluri-catégorielles.

[27] Consultez pour avoir un aperçu des programmes de recherche le « *Guide [annuel] des recherches et des chercheurs : année universitaire 2000-2001* » de l'I.N.R.P. ou le site www.inrp.fr.

[28] Comme par exemple, pour les mathématiques, les Instituts de Recherche sur l'Enseignement des Mathématiques (I.R.E.M.).

[29] La plupart des institutions, les Rectorats, les cellules T.I.C., les associations, etc... ont développé ces derniers mois des gisements d'information accessible par l'Internet, sans faire pour autant migrer les publications sur support traditionnel sur les réseaux.

[30] On définira la « veille-experte éducative » comme une « activité d'observation et d'analyse de l'évolution de l'édition traditionnelle et électronique » portant à la fois sur l'identification des divers gisements susceptibles d'intéresser quelques ou la totalité des enseignants d'un établissement, et une pré-analyse des contenus en guise de premier repérage et d'aide à la lecture.

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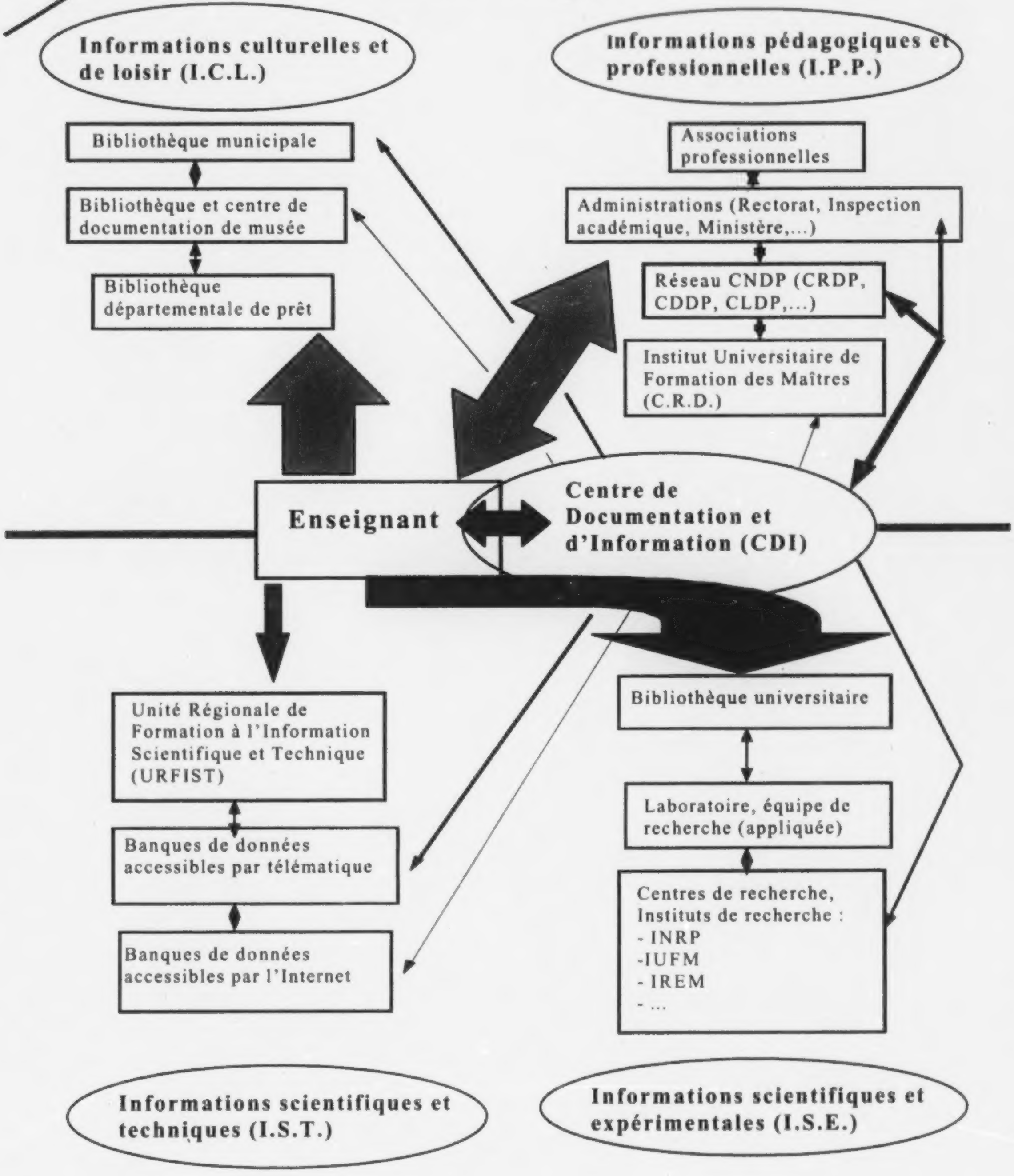
Annexe

L'écosystème informationnel du professeur de collège


Informations culturelles et de loisir (I.C.L.)
Bibliothèque municipale
Bibliothèque et centre de documentation de musée
Bibliothèque départementale de prêt
Informations pédagogiques et professionnelles (I.P.P.)
Associations professionnelles
Administrations (Rectorat, Inspection académique, Ministère,...)
Réseau CNDP (CRDP, CDDP, CLDP,...)
Institut Universitaire de Formation des Maîtres (C.R.D.)
Enseignant
Centre de Documentation et d'Information (CDI)
Unité Régionale de Formation à l'Information Scientifique et Technique (URFIST)
Banques de données accessibles par télématique
Banques de données accessibles par l'Internet
Bibliothèque universitaire
Laboratoire, équipe de recherche (appliquée)
Centres de recherche, Instituts de recherche :
- INRP
-IUFM
- IREM
- ...
Informations scientifiques et techniques (I.S.T.)
Informations scientifiques et expérimentales (I.S.E.)

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The role of works of imagination in preparing young people for the Information Society

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Abstract:

The aim of this paper is to examine the place of reading in the acquisition of information capability amongst young people and to consider the extent to which this is nurtured and aided by works of the imagination, whether in print or electronic form. Though recognition is being given to the fundamental nature of literacy skills there is a dearth of literature that explores the role of imaginative literature in the development of information literate individuals.

It has long been recognised that imaginative literature plays an important role in the acquisition of reading skills, not to mention aiding in the development of imagination, appreciation of narrative and providing enjoyment of story. Reading plays a part in physical, intellectual, language, emotional, personality, social, moral and spiritual development. Imaginative literature helps to develop the heart and mind of the individual. Human beings learn through story.

In areas of information wealth, educational institutions are emphasising the need for information literacy, and programmes evolving along with digitisation are embracing computer and Internet skills. There is no doubt that there is a need for such strategies to empower individuals to survive and flourish in the Information Age, but information power for individuals becomes a reality through the development of information capability to the required level. Information capability presupposes a range of skills which, in addition to technological skills and the knowledge to use information sources, includes general literacy.

The growing literature on information literacy tends to stress first two requirements but these are just part of the picture – what happens if a child or an adult cannot read? A world of information may be physically and politically available but this is of no value if it cannot be accessed because an individual lacks the ability to read.

Today, works of the imagination are not just confined to print, there are many excellent Websites providing works of imagination. Works of imagination in electronic format, and the use of electronic facilities in accessing and discussing works, also make a valuable contribution to achieving information capability. There is evidence in Australia, for example, that such facilities are encouraging more boys to read.

Despite the obvious link between the use of imaginative literature in developing literacy skills, and the importance of such skills in creating information literate individuals, there is a discernible gap in the literature of the acknowledgment and understanding of the role that works of the imagination play. A study in the UK and Australia is proposed to look at the issues outlined, and linking this with provision in school, and public libraries. The difference between school library provision in UK and Australia creates potential for further exploration.

The aim of this paper is to examine the place of reading in the acquisition of information capability amongst young people and to consider the extent to which this is nurtured and aided by works of the imagination, whether in print or electronic form.

It is said that we are now living in the Information Age. This new age is largely characterised by the developments which have taken place in technology and, in particular, information and communication technologies (ICT). The convergence of telecommunications, broadcasting and computer technologies, has had a significant impact upon society, comparable with previous major societal changes such as the industrial revolution or the advent of the printing press. The result of the latest revolution is unprecedented globalisation in which instantaneous contact can be made between people anywhere in the world, with all the legal and social issues that raises. The impact is so great that sociologists and anthropologists are now redefining out notions of *community* as the geographical definition becomes decreasingly relevant. The net result parallels again that of former major impacts in that inequalities in society are growing, amongst nations and amongst individuals.

To function effectively in the *Information Society* requires a high degree of literacy and a complexity of skills which is leaving some people behind. An OECD adult literacy survey (OECD, 2000) reported that across twenty countries, one in four adults who participated in the study, do not possess the necessary literacy skills to manage in today's world. It is a reasonable assumption that the study took place in poorer or Third World countries, but this is not so. The sample included the USA, Canada, four Scandinavian countries, Germany, the United Kingdom, Ireland, Australia and New Zealand. In confirmation of this statistic Hartman, Draeger and Bernstein (1991 cited in Fisher, 1999 p.56) reported that at least twenty per cent of US adults were functionally illiterate. Between forty and forty-five million people in the US are unable to understand written materials requiring the most basic reading skills (Fisher, 2000 p 57).

Lack of literacy skills on tjis scale causes problems for living, working and for survival in general. Smith (2000 p.378) identifies that there is already a gap between the skills of workers and the literacy demands of the workplace today. Others maintain that this gap will grow wider over the next two decades. Mikulecky (2000 p.380) for example, predicts that an expansion of multiple literacies will be required to navigate higher levels of information presented in a mix of three dimensional and print visuals. The worker of the future will need to acquire ever growing literacy skills to communicate simultaneously across several different work communities. Throughout the literature there are examples of the need for these skills. Hull (2000) Cites a case study in the States where workers in an electronics factory nearly caused a major and costly mistake because they failed to understand written instructions.

It is not only the workplace which demands such skills but in virtually every area of life. Healthcare is one example, Fisher (2000) argues that the pressures on the medical profession mean shorter stays in hospital and patients being discharged earlier. This requires that patients assume more responsibility for increasingly complex procedures and treatments. In order to make informed decisions patients must have the skills to understand demanding information.

Achieving Information Literacy

If a person is to survive in the Information Age they therefore need to be *information literate.* The examples already discussed demonstrate why is important, but what exactly does achieving information literacy mean? Definitions are still elusive and avidly debated, but it is generally agreed that it is something to do with combining the old *information skills* with the ability to manipulate the new technologies. In fact there is a discernable progression from *library skills* through *information skills* to *information literacy.* We will return to some of these issues later in the paper.

The most commonly cited and concise definition is:

> The ability to access, evaluate and use information from a variety of sources (Doyle,1994 cited in Brown, 1999 p.58).

Brown argues that information literacy actually subsumes a wide variety of skills and abilities including: critical thinking, problem-solving, personal, social and communication skills, library and computer literacy (1999, P.58).

In areas of information wealth, educational institutions are emphasising the need for information literacy, and programmes evolving along with digitisation are embracing computer and Internet skills. There is no doubt that there is a need for such strategies to empower individuals to survive and flourish in the Information Age, but information power for individuals becomes a reality through the development of information capability to the required level. Information capability presupposes a range of skills which, in addition to technological skills and the knowledge to use information sources, includes general literacy.

The need for reading skills in achieving information literacy

Many discourses on *information literacy* tend to emphasise technological requirements. The argument in this paper does not dispute that computer and technical skills are relevant or important, on the contrary. Storage retrieval and dissemination and the availability of information has never been quicker nor easier. In fact the preparation of this paper owes much to the ability to locate and obtain material in electronic format by technical means. Technical skills are a necessity in order to survive, but this is just part of the picture – what happens if you cannot decipher what you see on your screen? A *world of information may be physically and politically available* but this is of no value if it cannot be accessed because an individual lacks the ability to read (Wresch 1996 p.14). Whilst it is acknowledged, therefore, that success in information literacy is dependent on information handling and technical skills *reading skills are fundamental* (Royce, 1999 p.145).

We tend to assume that all twelve to sixteen year olds have embraced the new technologies eagerly but this is not always the case. One of my PhD students teaches in the further education sector. She reports a very sad case of one sixteen year old who, after taking computer classes for several months, committed suicide. His problem was that he could not keep up, and the reason was that he did not have adequate reading skills. When he could no longer hide the fact that he was lagging behind, he took the only way out the he could see. This is, thankfully, a very extreme case but reading skills are fundamental to functional literacy.

At one time a person was considered literate if they could sign their own name. Literacy, though, developed way beyond the confines of the religious and the scholarly (Brievik and Gee 1989, p22) and we all know about the various movements around the world to help the general populace to attain literacy skills, many of us owe our jobs to those movements! Later literacy came to mean skills in reading, writing and comprehension and in the 1950's UNESCO expanded the definition to the ability to use print in order to be able to function in every day life (Harris & Hodges, 1992 p.142). But, literacy is a dynamic concept and gradually, as the needs of society have evolved, the requisites of being able to function within that society have expanded and the concept of literacy has also changed to fit the bill.

In a study designed to reach a *deeper understanding of technological literacy* Gagel found that there was a bi-polar debate with technological skills at one end and literacy skills at the other (1997, p.4). Six *essential themes* emerged from the literacy discussion: *cognitive performance, cultural identity, knowledgeability, language, communication, utility and reading and writing* (p.3). Gagel states:

> Without question, the most common characteristic of literacy, that qualifies as an essential theme was reading and writing (p.4).

Kniffel (1999, p.36) argues that many devotees of the new technologies scoff at the idea of reading, but that the word should be at the heart of every library. In fact the imperative to utilize the technologies effectively creates a greater necessity than ever to be a proficient reader.

Royce (1999) summarizes the importance of reading:

> It [information literacy] all comes back to reading and the twin thrusts of getting readers hooked early in life and providing plenty of practice…you can survive in today's world if you can type with only one or two fingers. You can survive without ever using keyboard shortcuts or realising the full potential of your software. But, …you are going to find survival both difficult and expensive if your reading skills are poorly developed. In this Information Age, reading and reading skills…will enable users not just to survive, but to thrive.

The importance of imaginative literature in a child's development

It has long been recognised that imaginative literature plays an important role in the acquisition of reading skills, not to mention aiding in the development of imagination, appreciation of narrative and providing enjoyment of story. Spink in his seminal work *Children as readers* (1985) identifies eight areas of development in which reading plays a part: physical, intellectual, language, emotional, personality, social, moral and spiritual (pp. 29-42). Imaginative literature helps to develop the *heart and mind* of the individual. Human beings learn through story.

Over a hundred years ago, Charles Dickens in *Hard Times*, set in that other technological revolution, warned of the dangers of suppressing imagination and concentrating on *the facts*. His message is perhaps more true today, when fascination with the latest gadget or software can obscure the need for other kinds of development.

There are encouraging signs that the power of and need for imaginative literature has been recognised. Kibby (2000 p.381) argues that literacy has actually increased more in the Twentieth Century than any other time in history and that in the USA, eighteen year olds are better readers than ever before. The publishing industry is thriving according to Royce (1999, p.145) who cites recent surveys which indicate that more bookstores are opening, book sales are rising and people are generally reading more, despite the emphasis on technology.

Perhaps this viewpoint is endorsed by the *Harry Potter* phenomenon? Is this evidence that works of the imagination are still thriving and necessary? One seventeen year old describing why he was such a fan of Harry Potter wrote:

> I found the Harry Potter books enjoyable to read… I think to enjoy them you have to still have some imagination and sense of fantasy left to explore. The Harry Potter books take you to a part of yourself where you believe in magic…[and] unlock your imagination and let it run free through the many pages of magic and wizadry…(Cawkwell, 2001 p.669).

William Cawkwell is a Year Twelve student teenage boy in New Zealand a group not traditionally renowned for reading fantasy and works of the imagination.

If you are an experienced children's librarian of a certain age, the need for an early start and the benefits of young children being surrounded by imaginative works will be a mantra embedded in your psyche. For over three decades there have been studies, projects and a string of gurus providing evidence of such benefits, yet there has been a new awakening in terms of research in this area. There are many studies which confirm that habits developed in preschool years contribute to literacy in later life (Jordan et al, 2000). A study of the Birmingham *Bookstart* project, in the UK, shows that children who read surge ahead, educationally, of those children who do not (Ghouri, 1997). This study revealed that giving books to babies improved their performance in school, seven years on. Similarly, research on the Kirklees *Babies into Books* initiative also showed that early intervention is important in later development (Hardman and Jones, 1999).

The British Government have taken the need for reading on board as evidenced by the intruduction of the *Literacy Hour* in 1999 (DfEE, 1998). Since then there have been a number of initiatives, such as the National Reading Campaign, designed to foster reading.

The focus of this campaign from May 2001 will be on promoting children's reading to adults. It is widely recognised that creating a conducive environment at home, reinforces the development of literacy skills. This fact seems to have spawned a large number of *Family Literacy* projects which are springing up all over the World. Research at the University of Sheffield by Hannon and Nutbrown resulted in the REAL model, which set out steps for book-sharing (Hannon, 1996). This has given rise to a number of initiatives such as the PRINTS project in Newfoundland, Canada. This project advocates that parents should build in a literacy activity with their children each day (Fagan, 2000).

Developing the reading habit at an early age also engenders a love of reading in many children. Research by Krashen (1993) shows that *Free Voluntary Reading* results in better literacy skills, comprehension and writing, whilst on the reverse side those who do not read voluntarily are poorer at comprehension, reading and other skills. Royce (1999, p.150) argues that schools have a duty to develop good readers. Good readers are characterised by the ability to choose how and what they read. He argues that reading for enjoyment is the key to developing literacy (p.151). It has long been known that good quality works of imagination play a vital role in encouraging reading for enjoyment.

Jackie Marsh outlines further research at the University of Sheffield (Marsh, 2000). In this case the study examined the impact of popular culture on motivating young children to read. A range of resources including characters from television were placed in a 'batcave'. Children reportedly flocked to the cave and the project proved particularly useful in encouraging boys and some children who had been identified by teachers as having little motivation towards literary activities.

Education literature is also beginning to acknowledge the need to attend to emotional literacy. Gerry (2000) argues that understanding emotional literacy is essential in helping young people to develop self-esteem, and to become socially and educationally successful. This is not disconnected with being fitted for the Information Society. He further debates that if you want to get on in life you need to have developed the ability to interact with others and to manage your own emotions and that today's leaders more than adequately demonstrate these skills.

Leu and Kinzer (2000), in predicting the nature of literacy for the new Millennium, stress that social learning strategies will be critical to literacy instruction in the future. And that children need to interact in order to learn from each other Understandings of others takes on a new meaning in a global forum. In order to achieve this, the authors advocate *collaborative learning experiences*. The reason given is that:

> New technologies for information and communication will allow us to look beyond our classrooms, make new connections and see the World in a new and powerful way (p.1).

Written communication skills are also essential in the work place. Dreher (2000 p.382) argues that the social context of literacy activity is being determined by the new technologies and that today's workplace *includes widely distributed worksites connected by electronic links*. Higher education is increasingly taught in distance learning mode. This means increasingly heavy reliance on written communication.

Let us return to Spink's eight areas of development which may be enhanced by the encouragement of reading imaginative literature: physical, intellectual, language, emotional, personality, social, moral and spiritual (1985, pp. 29-42). These seem to cover adequately the requirements above.

Today, works of the imagination are not just confined to print, there are many excellent Websites providing works of imagination. Works of imagination in electronic format, and the use of electronic facilities in accessing and discussing works, also make a valuable contribution to achieving information capability. There is evidence in Australia, for example, that such facilities are encouraging more boys to read. Consequently developing and reading skills may be aided by use of the Web. A school in Clarkesville, Tennessee, for example, recently won an award for using technology to enhance reading skills (An evolving process, 2001 p.24). There are actually huge numbers of stories online, and a wealth of websites that can be accessed by children searching for their favourite authors and characters, including the famous *Harry Potter*. Enos (2000 p.24) proposes that the Web is a sources of stories not available elsewhere. It is certainly a source of classic stories fairy tales and out of print titles.

The role of the school library

It will come as no surprise to those working in or within the orbit of school libraries that there are many studies which predict that, in school, the nature of literacy will depend on the convergence of literacy instruction with networked information and communication technologies (Leu and Kinzer, 2000). Able users of information rely on three basic skills: reading, information handling and technical. There is no argument that a school library has a pivotal role in nurturing and encouraging such skills. Rafferty (1999) advocates an all- school policy on *learning for the information age*, whilst Langford (1999) places the school library firmly in the centre of that process. However, my own research a number of years ago (Eyre, 1999) showed that with changes in funding arrangements and the subsequent tighter budgets, school library budgets tended to be diverted towards material to support the curriculum and away from imaginative works.

But, there is an important role to play in nurturing reading for its own sake. The best predicter of adult reading ability is education. There is a great deal of evidence that *continuous* literacy-related practices in terms of reading and interpretive skills are important from an early age (Sheehan, Holt and Smith, 2000), but this means *sustained* effort at secondary level. Studies show that later attempts to increase literacy at adult level is piecemeal at best, and that there are but limited chances of achieving an adequate level of literacy through adult education. Royce (1999) argues that many people do not improve as readers because they do not practice and need to be encouraged to do this if they are to be prepared for the Information Society. The tightness of National Curricula of many nations precludes reading for enjoyment in the classroom makes the school library the natural place to nurture the reading habits begun in those early years.

Conclusion and the need for research

Despite the obvious link between the use of imaginative literature in developing literacy skills, and the importance of such skills in creating information literate individuals, there is a discernible gap in the acknowledgment and understanding of the role that works of the imagination play. Though recognition is being given to the fundamental nature of literacy skills there are few studies that explore the role of imaginative literature in the development of information literate individuals. Research in the UK and Australia is proposed to look at the issues outlined, and linking this with provision in school, and public libraries. The difference between school library provision in UK and Australia creates potential for further exploration.

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Say yes to school library provision – a project by the Harare Junior Council

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Abstract:

The school library plays a crucial role in the teaching and learning process. Every school, therefore, needs a properly organised library to ensure access to information by teaching staff, pupils as well as technical or administrative staff. However, most countries do not have legislation that make it mandatory for every school to have a library, and in countries like Zimbabwe, individual schools have made their own initiatives, resulting in some schools having well developed libraries, while others do not have anything that resembles a library. This paper is based on a school library advocacy initiative being undertaken by the Junior Council of the City of Harare which seeks to sensitize the community, and more importantly, the legislators, on the need for school libraries with the hope that they will pass legislation that commits government and/or other responsible authorities on the need to take school library service as high priority. Some notable achievements have been made since the inception of the project towards the end of 2000, and more seems likely to be achieved as great interest has been expressed by many, including the corporate world.

Introduction

Article 17 of the United Nations Convention on the Rights of the Child stipulates that "State parties recognize the important function performed by the mass media and shall ensure that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her social, spiritual and moral well-being and physical and mental health. To this end, State Parties shall:

(a) Encourage the mass media to disseminate information and material of social and cultural benefit to the child …;

(b) Encourage international co-operation in the production, exchange and dissemination of such information and material from a diversity of cultural, national and international sources;

(c) Encourage the production and dissemination of children's books;

(d) Encourage the mass media to have particular regard to the linguistic needs of the child who belongs to a minority group or who is indigenous;

(e) Encourage the development of appropriate guidelines for the protection of the child from information and material injurious to his well being….

Thomas Hammarberg, in his UNICEF published book A School for children with rights states that "A child-centred school gives the teacher a new role… A modern teacher will organize activities, provide materials, stimulate, guide and give advice. The pupils should have opportunities to 'learn how to learn' as a basis for continued, lifelong learning. A good library as the center of the school could encourage children to find out through their own initiative."

The Revised Draft outcome document A World fit for children also states that "***We are determined to ensure access by families, caregivers and children themselves to a full range of information and services to promote child survival, development, protection and participation …***"

The document goes further to say "***Their (children) energy and creativity must be nurtured and developed as we help them acquire knowledge and skills to cope with the demands of adult life…***"

It goes further to call on the private sector and the business community to assume greater social and corporate responsibility for making the benefits of research and development in science, medical technology, food fortification, education and mass communication ***available to children in greatest need.***

Equally concerned about the situation of school libraries, UNESCO has teamed up with the International Federation of Library Associations and Institutions (IFLA) to produce the IFLA/UNESCO School Library Manifesto, an instrument that is meant to help develop school libraries, and in the process fulfilling the requirements some of the articles of the United Nations Convention on the Rights of the Child. The manifesto states that ***"The school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. The school library equips students with life-long learning skills and develops their imagination, enabling them to live as responsible citizens"***.

And how is the situation in Zimbabwe? On page 101 of We are also human beings: a guide to children's rights in Zimbabwe, we are told that in a survey carried out in the mining communities had found out that "Children are the main people using libraries in Zimbabwe, but there are not nearly enough libraries to satisfy children's rights to books. Studies carried out by the Zimbabwe Book Development Council have also shown that the situation of school libraries in the majority cases is pathetic. This is why the Harare Junior Council embarked on this library advocacy initiative, through which Council intends to:

1. Create an awareness of the situation of school libraries in Zimbabwe through the production of a documentary.
2. Collect reading material for distribution to selected disadvantaged schools.
3. Raise funds for the purchase of more reading material.
4. Advocate through Parliament for positive legislation that provides room for the development of school libraries.

Documentary to Raise an Awareness of the Situation of School Libraries

Harare Junior Council decided to create awareness on the situation of school libraries in Zimbabwe through a video, which was to be screened by national television during the Zimbabwe International Book Fair 2001. The Zimbabwe International Book Fair was found appropriate as it gives an opportunity to bring the situation to the attention of the international book community in addition to the local Zimbabweans. In order to show a balanced picture of the school library situation in Zimbabwe, it was decided that schools to feature in the video had to be representative, covering both the well-provided for schools, and those that are not provided for at all, and should include the urban, peri-urban and rural settings.

Collection of reading material and fundraising

This has already started. The Harare Junior Council collected Over 3 000 books, which were donated to Zambuko Primary School as part of Harare Junior Council's contribution to International Children's Day of Broadcasting. More books have been sourced and will soon be disbursed to deserving schools within Harare and in Harare's peri-urban settlements. On 1 March 2001, a charitable organization donated Z$50 000.00 towards developing the Zambuko Primary School Library.

Harare Junior Council intends to continue to mobilize resources for disadvantaged schools, and has planned ***'Bring-A-Book' Musical Shows*** at which local musicians will perform to raise money to buy library books for selected schools. In addition to paying entrance fees, people attending the shows will also be requested to bring books, if they can. The first "Bring-A-Book" show took place on 28 April 2001 at the Harare International Conference Centre, while the second is planned to take place on the last day of the Zimbabwe International Book Fair, 11 August 2001. While the first musical show failed to break even, it generated a lot of publicity as the Junior Councilors were called to national television, three radio stations, and to the print media to talk about the school library advocacy project. Over three hundred books were also brought in by people coming to the show. An important outcome of the show was that it drew the attention of the private sector, and one building society and one company involved in the manufacture of beverages contributed financially towards the show. A partnership agreement is expected to be reached soon with the building society.

Other functions such as fun days at schools and activities such as car washing will also be used to raise funds. Money raised will be used to buy library books for schools, or library equipment; and depending on how much money has been raised, some of it will be used for follow up seminars to discuss library policy issues.

Advocacy for Positive School Library Legislation-Workshop with Parliament

While mobilizing resources for selected deserving libraries will help collect library resources, this is a piece-meal approach, and a national solution will be to advocate for legislation that caters for school library development. A two day workshop was planned for at which Members of Parliament are sensitized on the right of the child to access appropriate information, the UNESCO/IFLA School Library Manifesto, and loopholes in the current library legislation as seen in the light of the issues raised in the

UNESCO/IFLA School Library Manifesto, as well as in the light of the requirements of the article 17 of the United Nations Convention on the Rights of the Child.

Junior Council intended to run the workshop on 22-23 April 2001, but UNICEF, who had been approached to sponsor the workshop wanted the project document revised to reflect issues covered in the Global Movement for Children, a campaign spear-headed by UNICEF to assess progress made in fulfilling the provision of the Convention on the Rights of the Child adopted at the World Summit for Children in 1990. At the time of writing, the document has been revised as required, and will be handed over to UNICEF soon. The workshop is expected to take place between May and August 2001.

The objectives of the workshop are:

1. To create an awareness among legislators on the right of the child to access information, hence the need for well furnished school libraries;
2. To demonstrate the uneven pattern of school library provision in Zimbabwe;
3. To familiarize legislators with the IFLA/UNESCO School Library Manifesto;
4. To enable legislators to see one of the best school library systems in Zimbabwe (Prince Edward) so that they can compare with the library facilities existing at schools in their respective constituencies.

Harare Junior Council intends to invite the following people to this workshop, which it proposes to be held at Prince Edward High School during the May – August school term:

1. Members of Parliament from Harare (16)
2. Members of Parliament of Zimbabwe's Library Committee (9)
3. Members of Parliament of Zimbabwe's Education Committee (10 : two have been counted on the Library Committee which they also sit on)
4. A Representative of UNICEF Harare Office
5. A Representative of UNESCO's Harare Office
6. A Representative of The City of Harare Commission
7. A Representative of the National Libraries and Documentation Services, a department in the Ministry of Education, Sport and Culture
8. A Representative of the Zimbabwe Library Association
9. A Representative of the Ministry of Finance involved in the National Budget
10. Child librarians from 10 selected schools, or heads of the schools where there are no child librarians in the schools, or where children may not be comfortable speaking in front of such an audience.

Paper presentations proposed for the workshop are:

1. The Child Right to Access Information – UNICEF
2. The IFLA/UNESCO School Library Manifesto – UNESCO
3. The Role of the School Library in improving the quality of Education – a librarian who has knowledge of school libraries
4. The National Library and Documentation Services Act's treatment of school libraries – National Library and Documentation Services
5. How different schools are doing it: presentations by persons selected from various school from Harare (covering both former group A and group B schools), peri-urban and rural areas.

Discussions will be held after the presentations, and representatives from the Education, Sport and Culture and Library parliamentary committees will be requested to say what they intend to do in order to improve school library provision in the country.

Conclusion

We certainly hope that more favorable responses from the donor community, the corporate world and society in making this project a success.

The Government of Zimbabwe has launched a fund to financially assist children to go to school. T his is a very welcome move as more children now have access to free education but it is the Council's obligation to then assist by ensuring that those children that will go to school have books to read.

By educating one child an entire family has been educated, as that one boy/girl will then educate his siblings. This will then be a chain reaction that cannot be broken and that will see Zimbabwean Children making a difference not only in their lives but also in the life of this country.

Let us all join hands and

'For good quality education, Say Yes for school library provision.'

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The Catalogue collectif de France : Opening Interlending Services to end users

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Bref panorama du prêt entre bibliothèques en France

Le prêt entre bibliothèques en France est réalisé pour 95 % de son volume par l'Institut de l'information scientifique et technique (INIST) et le réseau des bibliothèques universitaires. Le volume de l'activité correspond à environ 1.8 million de transactions annuelles. Ce chiffre est en baisse depuis 2000, en raison du développement des abonnements aux périodiques électroniques dans les bibliothèques universitaires françaises (Consortium Couperin regroupant plus de 70 établissements).

Les bibliothèques publiques françaises réalisent en moyenne 40 000 transactions annuelles de prêt entre bibliothèques. Plusieurs raisons expliquent la faiblesse de l'activité : tout d'abord, la nature des fonds, essentiellement anciens ou à caractère patrimonial, qui constituent les collections françaises, ne se prête pas au prêt de documents originaux ; ensuite, les bibliothèques publiques ne disposent pas de l'équipement nécessaire à la production de copies de substitution, même si certaines commencent à trouver des solutions auprès de prestataires extérieurs ; par ailleurs, peu de catalogues sont accessibles par Internet (110 bibliothèques disposent d'un site WEB, 24 bibliothèques sur 60 établissements partenaires du CCFr ou pôles associés disposent d'un catalogue en ligne), et cela entraîne un manque de visibilité des collections françaises par les utilisateurs finaux ; enfin, les bibliothèques publiques ne sont pas équipées de messagerie de prêt entre bibliothèques ni d'application de gestion des demandes.

La Bibliothèque nationale de France et la fourniture de documents

La fourniture de documents à la Bibliothèque nationale de France se trouve dans une phase transitoire qui a commencé en 1997 lors de la fermeture du Centre de prêt. Depuis lors, il n'existe plus de collection destinée au prêt entre bibliothèques et l'établissement ne prête pas de documents originaux. La Bibliothèque nationale de France a privilégié une politique de réseaux et développé l'accès à distance à ses collections. Plusieurs projets, conduits dans les années 1990, ont aujourd'hui une implication dans la fourniture de documents. L'un de ces projets a consisté à construire un réseau de pôles associés poursuivant une politique documentaire partagée. Ce réseau compte aujourd'hui 74 établissements, choisis pour effectuer des acquisitions dans une discipline donnée en recherchant la complémentarité avec les collections de la Bibliothèque nationale de France. Par convention, chaque pôle documentaire s'engage, contre une subvention, à acquérir des documents dans une discipline, à signaler ces collections dans un catalogue accessible en ligne et à participer à la fourniture partagée de documents avec la BnF.

Une autre initiative du nouvel établissement a consisté à développer les services aux utilisateurs finaux. Une bibliothèque numérique s'est constituée, riche de 86 000 textes imprimés et de 240 000 images disponibles en grande partie sur le site Gallica. Les utilisateurs peuvent accéder gratuitement à cet échantillon représentatif des collections de la Bibliothèque nationale de France : chaque jour, 3 500 lecteurs, 6 500 documents consultés et 3 300 documents déchargés témoignent de l'importance du service rendu aux utilisateurs français et étrangers.

Simultanément, la Bibliothèque nationale de France a créé ou mis à niveau deux services pour réaliser la fourniture de documents à partir de ses propres collections. Le Service reproduction produit et commercialise à la demande des copies de substitution des collections patrimoniales, en utilisant tous les procédés dont la numérisation depuis avril 2001. Son objectif pour les trois années qui viennent est de développer un service intégré de commande, paiement et livraison par Internet. La fourniture de documents réalisée par le Service reproduction s'adresse directement aux utilisateurs finaux.

Le Service de fourniture de documents se positionne davantage sur une activité de prêt entre bibliothèques. Sa mission actuelle consiste à réorienter les demandes des bibliothèques étrangères vers les bibliothèques françaises et à vérifier que ces demandes obtiennent satisfaction. Le Service de fourniture de documents joue donc le rôle de médiateur entre les bibliothèques emprunteuses et les bibliothèques prêteuses. Depuis novembre 2000, les bibliothèques françaises sollicitées pour un prêt à l'étranger ont satisfait 70 % des demandes, résultat jugé satisfaisant, vu le type de documents demandés (livres anciens et documentation technique essentiellement). Cette activité de réorientation devrait diminuer dans les années qui viennent, lorsque les bibliothèques étrangères connaîtront et utiliseront les outils en ligne que sont le Catalogue collectif de France et le Système universitaire. La seconde mission du Service de fourniture de documents sera de développer le service d'emprunt de documents ou de fourniture d'articles aux lecteurs de la BnF en s'adressant à des services et des bibliothèques français ou étrangers.

Le Catalogue collectif de France : un outil ouvert à tous

Jusqu'en janvier 2001, la France ne disposait pas de catalogue collectif national : les utilisateurs et les bibliothécaires pouvaient consulter les catalogues en ligne de certaines bibliothèques publiques, le catalogue collectif des bibliothèques universitaires (SUDOC) ou la base de la BnF BN OPALE PLUS. Le Catalogue collectif de France s'enchaîne fort logiquement avec la politique documentaire partagée des pôles associés, puisqu'il signale une partie importante des collections françaises, donne leur localisation dans les bibliothèques universitaires, dans 55 bibliothèques publiques et à la Bibliothèque nationale de France, et débouche sur la fourniture de documents.

Le Catalogue collectif de France permet d'interroger simultanément 3 bases de documents grâce à un serveur Z 39.50 : le système universitaire, catalogue collectif des bibliothèques universitaires (monographies, thèses, périodiques), accessible gratuitement et sans accréditation par Internet à une adresse spécifique, qui recense les fonds courants et parfois les fonds rétroconvertis plus anciens, le catalogue de la BnF BN OPALE PLUS qui signale l'ensemble des collections de monographies et de périodiques conservés dans les fonds patrimoniaux, et enfin une base issue de la rétroconversion de fonds anciens ou spécialisés de 55 bibliothèques publiques. L'ensemble totalise plus de 14 millions de notices. Un répertoire des bibliothèques françaises permet en outre d'identifier un établissement et d'accéder à ses coordonnées (en particulier les adresses des sites et des catalogues en ligne) et aux informations sur les services offerts.

Le Catalogue collectif de France présente en l'état une lacune de contenu : les fonds courants des bibliothèques publiques, tout à fait pertinents pour la fourniture de documents, n'y sont pas recensés. Cependant, on peut considérer que le noyau dur du catalogue est achevé. Il s'agit aujourd'hui de voir comment on peut le faire évoluer pour qu'il soit utile à la fourniture de documents et performant (amélioration des délais). On réfléchit particulièrement à une interface qui permettrait d'interroger tout ou partie des catalogues des bibliothèques publiques disponibles sur Internet, sur le modèle allemand du Karlsruher virtueller Katalog par exemple. Le Catalogue collectif de France deviendrait alors un portail d'accès à différents types de ressources conservées dans les bibliothèques françaises.

Du signalement à l'accès aux documents

A la suite de la localisation des documents, le Catalogue collectif de France propose trois types de services à l'utilisateur final : le prêt entre bibliothèques, la reproduction ou la réservation de documents.

Concrètement, un utilisateur final peut demander le prêt d'un document signalé dans le Catalogue collectif de France : le système lui permet d'enregistrer sa demande, de saisir ses coordonnées et de choisir une bibliothèque qui traitera pour lui la transaction et se mettra en relation avec la bibliothèque de prêt. Il pourra suivre l'avancement de sa demande en ligne. Quelques règles de gestion ont été élaborées pour contrôler l'utilisation : pour un document localisé uniquement à la Bibliothèque nationale de France, le système met l'utilisateur en relation directe avec le Service reproduction ; pour les demandes effectuées par les utilisateurs étrangers, le système désigne automatiquement le Service de fourniture de documents pour relayer la demande auprès des bibliothèques françaises.

Les conditions d'utilisation sont volontairement très larges : il s'agit d'une application simple accessible par Internet, offrant les fonctions de base et permettant ainsi une utilisation souple et adaptée à des besoins qui peuvent varier selon les bibliothèques. En revanche, il nécessite que chaque bibliothèque utilisatrice élabore des procédures de travail fiables.

L'outil est en accès libre sur Internet, ne nécessite pas d'accréditation ni d'abonnement. Son utilisation est gratuite. Tout usager, particulier ou bibliothèque, disposant d'une connexion Internet, peut l'utiliser pour générer des demandes de fourniture de documents.

Chaque bibliothèque répond aux demandes en fonction de sa propre politique de prêt entre bibliothèques. Elle choisit d'être bibliothèque emprunteuse et/ou bibliothèque prêteuse, applique ses règles de gestion et ses tarifs. Elle met à jour les données qui la concernent dans le répertoire du Catalogue collectif de France afin de mieux renseigner les utilisateurs finaux : fonds autorisés pour la fourniture de documents, prestations proposées, tarifs.

La nécessité d'une médiation

Lorsque l'utilisateur final demande une copie de document, il est mis en relation avec la bibliothèque fournisseur par le Catalogue collectif de France. Lorsque le même utilisateur final demande le prêt d'un document original, il doit passer par l'intermédiaire d'une bibliothèque qui emprunte le document pour lui, le communique et le réexpédie. La circulation de documents originaux implique toujours une médiation.

Prenons notamment le cas des utilisateurs finaux étrangers. La médiation d'une bibliothèque auprès des bibliothèques prêteuses potentielles est obligatoire. Le Service de fourniture de documents de la Bibliothèque nationale de France est l'intermédiaire de la transaction entre les utilisateurs et les bibliothèques françaises. Il suit le traitement des demandes jusqu'à ce qu'elles soient satisfaites. Il apporte une garantie à la bibliothèque prêteuse. Lorsque la transaction donne lieu à un paiement, la médiation est également nécessaire.

Les bibliothèques et les utilisateurs

Dans le cas des documents localisés dans les bibliothèques universitaires : la pratique du prêt entre bibliothèques est ancienne, la nécessité et l'intérêt de participer au prêt international sont reconnus. Enfin, les circuits sont stables et maîtrisés par les bibliothèques et les utilisateurs finaux.

Dans le cas des documents localisés uniquement à la BnF : l'établissement ne prête pas de documents mais propose la fourniture de copies de substitution payantes. Le Service de fourniture de documents assure le rôle de point d'entrée pour les demandes des bibliothèques étrangères et de pôle d'information sur les ressources documentaires françaises, les bibliothèques et les réseaux de prêt entre bibliothèques.

Dans le cas des documents localisés dans les bibliothèques municipales :

Chaque bibliothèque fixe sa politique de fourniture de documents de manière indépendante. Les documents recensés pour l'instant dans le Catalogue collectif de France sont anciens ou font partie de collections locales ou précieuses : la plupart ne peuvent sortir des établissements. Les bibliothèques publiques, comme la Bibliothèque nationale de France, ont recours à la fourniture de copies de substitution produites soit en interne soit chez des prestataires privés.

Le Catalogue collectif de France donne une visibilité sur des ressources documentaires jusqu'ici peu ou pas signalées. L'ouverture du module de prêt entre bibliothèques engendrera certainement une augmentation non négligeable des flux de prêt dans les bibliothèques publiques.

Quelques adresses utiles :

Pour localiser et demander un document dans les bibliothèques françaises : www.ccfr.bnf.fr

Pour localiser un document dans les bibliothèques universitaires : www.sudoc.abes.fr

Pour commander une reproduction de document à la Bibliothèque nationale de France :
www.bnf.fr/pages/accedocu/repro_pres.htm ou adresse électronique spécifique : reproduction@bnf.fr

Pour demander la localisation d'un document en France : www.bnf.fr/pages/accedocu/sfdd.htm ou adresse électronique spécifique : ill@bnf.fr

Pour identifier un document de la Bibliothèque nationale de France : http://catalogue.bnf.fr

Pour consulter un texte ou une image de la bibliothèque numérique : http://gallica.bnf.fr

Pour consulter des catalogues de bibliothèques publiques : liste disponible sur
http://www.portail.culture.fr/sdx/pic/culture/int/catégorie.xsp?id=c371

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Bibliotek.dk : Immediate access to Danish libraries - a path to follow

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Abstract:

Bibliotek.dk is a development project, resulting in a web site, which gives the Danish citizen access via the Internet to search and order material in the collections of Danish public and research libraries. The citizen decides herself which library she wants to collect the material from. Bibliotek.dk is developed in connection with the change of the public libraries act into Act regarding library services. The Act was passed in May 2000 and concerns both the Danish public libraries and a number of government and government-funded libraries.

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1 Background

Denmark has a long tradition of many different forms of co-operation between public libraries and research libraries (special and scientific libraries). Interlibrary loan is essential in this context. Giving access to information on collections in the individual libraries has therefore been a central task for many years.

1.1 DanBib

In the early nineties the databases, which contained location information from the public and research libraries' collections, were combined in the database called DanBib.

DanBib is a professional tool for library staff and contains about 14 million bibliographic records consisting of:

- Research library holdings 1981 ff., and in the case of a large number of libraries also the rest of their book stock
- A large number of public libraries' total stock of materials, books, periodicals with holdings statements, music and audio-visual materials
- The Danish National Bibliography
  - Danish Review Database 1990 ff.
  - Danish Article Database 1981 ff.
  - Danish Visual Recordings 1984 ff.
  - Danish Books 1970 ff.
  - Danish Cartographic Materials 1987 ff.
  - Danish Sound Recordings 1982 ff.
  - Danish Music 1987 ff.
  - Danish Music Recordings 1987 ff.
  - Danish Serials 1976 ff.
- Record Reviews 1984 ff.
- British National Bibliography 1981 ff.
- Library of Congress 1981 ff.
- ISSN Register (international periodicals index)
- NOSP (periodicals holdings in the Nordic countries)

The base is updated daily.

The financing of DanBib has been done partly via centrally apportioned government means, partly via user's fees dependent on use. This means that the libraries paid part of DanBib's working expenses directly dependent on use. This payments arrangement has for some time been the object of discussion and caused dissatisfaction in the libraries. It has also prevented many libraries' realisation of the desire and need to make DanBib accessible to the end user.

As the libraries' own catalogues were being opened on their homepages, there was an increasing demand for DanBib to be opened to the end user.

1.2 Act regarding library services

A change in the public library act has been under way since the mid-nineties. As part of this preparatory legislative work the Danish minister for culture, Elsebeth Gerner Nielsen chose to put forward the political wish/claim that DanBib were to become accessible to all Danish citizens on the Internet, not only with a search but also an ordering facility.

Soon the proposal won general approval which meant that the Danish National Library Authority was entrusted – with the Danish Library Centre in the role of developer – to create a *popular edition* of DanBib, accessible on the Internet and with an ordering facility available from the start: the 'DanBib for All' project.

2 From DanBib for All to bibliotek.dk

A project group consisting of representatives of those who had commissioned DanBib: The Danish Government, represented by the Danish National Library Authority, the National Association of Local Authorities, Copenhagen and Frederiksberg metropolitan authorities and the Danish Library Centre was established. The National Library Authority was appointed project manager and the Danish Library Centre, in charge of the operational procedures of DanBib, was to take on the task of developer.

January 1999 saw the first tentative steps being taken towards the realisation of the project. A seminar was arranged for an invited circle of Danish interested parties. It was important at the seminar to look at concrete information from our Nordic sister countries on the current situation regarding the end users access to the respective countries' common catalogues. One end user was invited to present his views on which expectations and demands one might have in relation to collective access to the Danish libraries' collections.

2.1 Development project bibliotek.dk

Based on what had emerged at the seminar, development work started in earnest. A discussion paper on DanBib for All was produced, and in May/June more than 400 library members of staff participated in two open meetings about the project. Work on demarcation and content in the base which were to become accessible in bibliotek.dk, development of user interface and the preparatory legislative work went hand in hand, and in January/February 2000 the comparatively concise outlines of bibliotek.dk were submitted for discussion to more than 900 library members of staff at four country-wide meetings.

2.2 The user's central position

In the development of bibliotek.dk, the attention has focused on the end user. User interface as well as content have all the way been intended to live up to the requirements and expectations of the user. The Danish Library Centre, together with the web bureau, Araneum, which was to develop the user interface, therefore chose almost straight away to attach a user panel to the development project. From the beginning it was decided to develop the user interface under the assumption that the user had a minimum of knowledge of how to use PC and Internet and a minimum of knowledge of libraries. As far as age was concerned we decided to assume that bibliotek.dk could be used by children from about 10-12 years old. On the basis of this, user panels were selected, partly to outline the requirements to user interface and search facilities. The panels consisted of people of different ages, people in employment, unemployed people, pensioners, women and men. The end user's - and not the professional user's (the librarian's) - wishes and demands in relation to the system has therefore been the most important aspect.

2.3 Accessibility

The fundamental idea has all along been that bibliotek.dk must be accessible to everyone. A user interface in English has therefore been developed and the page has also been tested with a view to accessibility for the visually impaired.

2.4 bibliotek.dk contains the following:

- Localisations from nearly every public library and public research library in Denmark
- The Danish National Bibliography, cf. content of the DanBib database.

This means that one can search on all registered books, periodicals, CD-ROMs and other materials, acquired in Danish libraries. There is a total of about 6-7 million titles, covering several million materials.

2.5 Libraries

The bibliotek.dk concept stresses the fact that it is the individual user who chooses the material he/she wants and also the place of collection, i.e. the library where the user wants to pick up the actual, ordered material.

So it is the library system in general which in the most rational and economical way makes sure that the material ordered, is procured for the place of collection, in case the library chosen as place of collection does not itself hold the material in question.

Each library determines its own service profile within the frames of the library act. This means i.a. that music materials, CD-ROMs etc. belong to the group of obligatory material, which will not be included in the interlibrary loan co-operation until after 1 January 2003.

It also means that the individual library in bibliotek.dk has described in quite precise terms the service, which is offered to the user. Questions about searching and description of books, periodicals, music etc. as well as assistance in using bibliotek.dk must therefore be directed at the individual user's local library. Questions about the individual request must be directed at the library, which the user has chosen as place of collection.

The participating libraries are listed in *Biblioteksvejviseren*, which is an index of all the public libraries that want to be visible in bibliotek.dk

2.6 Access to other net services

A number of Danish libraries have individually - or together - developed a number of net services. The services, which are of a national character, are included with links on bibliotek.dk

2.7 Technology

The Danish libraries' technological co-operation has right from the start been built on open international standards, which are only to a limited extent adapted to Danish conditions. The DanBib base is thus built on standardised modules which are immediately compatible with the library systems that build on standards which are on the Danish market.

In the development of bibliotek.dk no particular technological demands were placed on the participating libraries. Existing library systems were, therefore, supposed to be able to be used without further immediate technological requirements and subsequent economic consequences.

As is the case of the general development of the Danish library system, bibliotek.dk has been built up piece by piece, module by module. The intention has never been at the theoretical level to develop a complete, closed product – on the contrary – the development is process orientated and continuous.

With present technology it is not possible to show loan status in bibliotek.dk. But via bibliotek.dk it is possible to change to the individual library's catalogue in order to find the information wanted. It has been a question of choice here, as technology and implementation of for example Z39.50 for holdings registration is not yet established in Denmark, but the first implementations are expected in the autumn.

2.8 Fees or no fees

In connection with the passing of *Act regarding library services*, the question of a small fee for the use of bibliotek.dk was discussed. Initially there was in fact a suggestion included of charging a fee of DKK 5,00 (just over ½ USD) per request.

The result of the deliberations was that *Act regarding library services* now contains a clause to the effect that following negotiations with relevant parties, the minister for culture may decide that the libraries must charge a fee for the ordering of materials ordered in bibliotek.dk. The services, which are at present available in the libraries, are in principle free of charge for the end user.

3 Opening and use

Bibliotek.dk was opened at the National Library Authority's annual meeting with the Danish library directors on 31. October 2000 by the Danish Minister for Culture Affairs. On this occasion a short press release was issued, and a rather informal meeting with the press was arranged, but all in all not a lot of effort was spent on presenting this unique new service to the Danish citizens. This strategy was quite deliberate, as even though bibliotek.dk had been thoroughly tested all the way through, we still could not really predict how the system would actually work in practice. We have witnessed too many launchings in Denmark of new, spectacular IT-projects, which were not able to live up to expectations once they went into operation.

Bibliotek.dk went on the air – and stayed there!

3.1 Information campaign

In the spring of 2001 we conducted an information campaign about *Act regarding library services*. A major part of the campaign concentrated on bibliotek.dk. The campaign consisted of:

- Banner advertisements on selected web sites
- A competition with questions to be solved in bibliotek.dk
- door-to-door distributed postcards
- Chilicards (postcards displayed in educational institutions)
- GoCards (postcards displayed in cafés etc.)
- ½ mil. leaflets to the libraries

3.2 Use

And how much has bibliotek.dk been used up till now?
As anticipated the number of requests made when bibliotek.dk opened was not very impressive. During the first month in operation, i.e. November 2000, a total of just over 16,600 requests were made, distributed on 14,000 placed with the public libraries and about 2,000 requests with the research libraries.

In April 2001 there was a total of about 38,500 requests, distributed with just over 33,000 at the public libraries and just under 5,000 at the research libraries.

The figures for the entire period since bibliotek.dk opened are: more than 127,000 requests, 108,500 at the public libraries and about 18,000 at the research libraries.

3.3 What has been particularly in demand?

No actual study has been carried out as to what the user has been ordering. But all the public libraries agree that music CDs and materials from the research libraries are being asked for. Random samples show that ILL from research libraries to the public libraries has increased considerably. Apart from that quite ordinary requests are received for quite traditional material.

3.4 Who use bibliotek.dk

We have no statistics for this, but the immediate reaction from the libraries is that students at all levels are frequent users. This hardly comes as a surprise.

3.5 User expectations and wishes

As will appear from what I have already said, it is quite obvious that we have tried to meet the users' needs during the development of the project. Although in the early stages it turned out to be quite difficult to get the users to actually consider what they would want when suddenly faced with the possibility of gaining access to all the library collections in Denmark.

I should just like to mention a couple of our users' reactions:

Great!!! I haven't tried to order any books yet, but if you keep your promises, well then this is a truly brilliant tool.
I have tried a couple of different searches, and am impressed. It works very well!

Thanks for the postcard: These site it the best thing to come out of the public sector for a very long time.

I have been wondering for a long time whether it wouldn't be possible to search in a common library database.

And now it is – and you can even order the materials at the same time.

It is simply PERFECT!

To put it briefly – bibliotek.dk is "a place where one seeks (searches) – and finds answers"!

3.6 Changes in the libraries

What then are the consequences for the libraries?
Without a doubt bibliotek.dk has increased the number of requests in the libraries – and this is particularly true in the case of the public libraries. What the result will be as regards for example an increase in loans and interlibrary loans we can only say for certain when we have the statistical figures for 2001.

But one thing is absolutely certain – the traditional materials such as books, periodicals etc. will for many years to come remain central in Danish libraries. In the further development of bibliotek.dk the emphasis will therefore be on processing and executing so-called user initiated interlibrary loan requests as rationally and economically as possible.

4 Perspectives

My view of the future is that the bibliotek.dk we know today is just the beginning. The web page will be developed in co-operation with all relevant parties in Denmark, but it would be unwise at this stage to try to predict the final scope for bibliotek.dk

All development initiatives will be based on improved service to the user. Right now the following definite improvements are imminent:

- Development of a better interplay between local library system and bibliotek.dk
- Development – in co-operation with publishers and booksellers – of a 'purchase' button, i.e. a link to the possibility of buying from booksellers both on the net and from local bookshops
- Improved subject search
- Integrated search in physical materials and registration of Internet resources collected from net services.

And much more.

Improvements and rationalisations for the libraries will obviously be high on the agenda. Both in bibliotek.dk and in DanBib which is still the professional tool of library staff.

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Bibliotek.dk : l'accès immédiat aux bibliothèques danoises – un chemin à suivre

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Résumé :

Bibliotek.dk est un projet de développement qui a débouché sur site web donnant accès au citoyen danois aux collections des bibliothèques danoises publiques ou de recherche. Le citoyen décide lui-même dans quelle bibliothèque il veut consulter les documents repérés sur le site. Bibliotek.dk est développé en rapport avec la mutation de la Loi des bibliothèques publiques en une Loi sur les services des bibliothèques. La nouvelle loi est passée en mai 2 000 et concerne à la fois les bibliothèques publiques et un certain nombre de bibliothèques gouvernementales ou financées par le gouvernement.

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1. Contexte :

Le Danemark a une longue tradition de coopération entre bibliothèques publiques et bibliothèques de recherche (spécialisées ou scientifiques). Le prêt entre bibliothèques est essentiel dans ce contexte. Informer sur les collections des différentes bibliothèques a été une tâche centrale depuis de nombreuses années.

1.1. DanBib :

Au début des années quatre-vingt-dix, les bases de données qui localisaient les collections des bibliothèques publiques et de recherche ont été fusionnées dans une base appelée DanBib. DanBib est un outil professionnel pour le personnel des bibliothèques et contient environ 14 millions de notices :

- les collections des bibliothèques de recherche depuis 1981 , et dans beaucoup de bibliothèques, l'ensemble des collections ;
- les collections (livres, périodiques, musique, audiovisuel) d'un grand nombre de bibliothèques publiques ;
- la Bibliographie nationale danoise ;
- la base de donnée des revues danoises depuis 1990 ;
- la base de données des articles depuis 1981 ;
- Les enregistrements visuels danois depuis 1984 ;
- Les Livres danois depuis 1970 ;
- Les documents cartographiques danois depuis 1987 ;
- Les Documents sonores danois depuis 1982 ;.
- Les enregistrements de musique danoise depuis 1987 ;
- Les Périodiques danois depuis 1976 ;
- La Bibliographie nationale britannique depuis 1981 ;
- La Bibliothèque du Congrès depuis 1981 ;
- Le registre ISSN ;
- NOSP (les périodiques reçus dans les bibliothèques nordiques).

La base est mise à jour chaque jour.

Le financement de DanBib est assuré en partie par le gouvernement, en partie par un paiement par l'usager. Cela veut dire que les bibliothèques ont payé une partie des frais de DanBib, ce qui a été l'objet de débats pendant quelques temps et un motif de mécontentement dans les bibliothèques. Cela a aussi retenu certaines bibliothèques de rendre accessible DanBib à l'usager final. Comme les catalogues des bibliothèques ont été mis sur les pages d'accueil de leurs sites Internet, il y a eu une demande grandissante que DanBib soit accessible pour l'usager final.

1.2 La Loi sur les services de bibliothèques :

Le changement de la loi des bibliothèques publiques a été à l'étude depuis le milieu des années quatre-vingt. Dans le cadre de ces travaux préparatoires, le ministère danois de la culture, Elsebeth Gerner Nielsen, a choisi de mettre en avant le souhait/demande que DanBib soit accessible par tous les citoyens danois sur Internet, non seulement pour une recherche mais aussi pour commander un document.

La proposition a été rapidement approuvée, ce qui a signifié que le Service national des bibliothèques danoises a reçu la mission , avec le Centre danois des bibliothèques comme développeur, de créer une «version populaire » de DanBib, accessible sur Internet, avec la possibilité de commander le document dès le départ : le projet « DanBib pour tous ».

2 De « DanBib pour tous » à bibliotek.dk :

Un groupe a été formé, constitué de représentants des commanditaires de DanBib : le gouvernement danois, représenté par le Service national des bibliothèques danoises, l'Association nationale des collectivités locales, les collectivités urbaines de Copenhague et Frederiksberg et le Danish Library Centre. La National Library Authority a été désignée comme manageur du projet et le Centre danois des bibliothèques, responsable des procédures opérationnelles de DanBib, devait prendre en charge le rôle de développeur.

C'est en janvier 1999 que les premiers pas ont été faits, avec l'organisation d'un séminaire. Il a été important de voir comment les usagers avaient accès aux catalogues dans les autres pays nordiques. Un usager final avait été invité à présenter son point de vue sur les attentes et les demandes sur l'accès collectif aux collections des bibliothèques danoises.

2.1 Le développement du projet « bibliotek.dk » :

A partir des conclusions de ce séminaire, le développement a commencé pour de bon. Un texte à discuter a été rédigé sur « DanBib pour tous », et deux rencontres ont réuni plus de 400 bibliothécaires sur ce thème en mai et juin. Le travail sur ce qui devait devenir accessible dans bibliotek.dk, le développement de l'interface avec l'usager et le travail législatif ont été menés de front et en janvier/février 2000 les contours relativement précis de bibliotek.dk ont été soumis à plus de 900 bibliothécaires pour discussion dans quatre rencontres nationales.

2.2 La position centrale de l'usager :

Dans le développement de bibliotek.dk, l'attention est focalisée sur l'usager final. L'interface avec l'usager et le contenu ont été toujours conçus pour répondre aux attentes et demandes de l'usager. Le Centre danois des bibliothèques, avec la société, Araneum, qui a développé l'interface, ont ainsi associé un échantillon d'usagers au développement du projet. Il a été décidé dès le départ de supposer que l'usager avait des connaissances minimales sur l'usage d'un PC et d'Internet, ainsi que sur les bibliothèques. Pour l'âge, il a été décidé que bibliotek.dk pourrait être utilisé par des enfants dès 10-12 ans. Sur ces bases, un échantillon d'usagers a été sélectionné, en partie pour les attentes sur l'interface, en partie pour les outils de recherche. Les échantillons étaient formés de personnes d'âges différents, travaillant ou sans emploi , retraités, femmes et hommes. Ce sont les souhaits et demandes de l'usager – et non ceux du professionnel (donc des bibliothécaires)- qui ont été les plus importants.

2.3 Accessibilité :

L'idée fondamentale a été que bibliotek.dk soit accessible pour tous. Une interface en anglais a pour cela été développée et les pages ont été testées pour les mal-voyants.

2.4 bibliotek.dk contient :

- la localisation de presque toutes les bibliothèques publiques ou de recherche au Danemark ;
- La Bibliographie nationale danoise (voir le contenu de la base DanBib).

Cela veut dire que l'on peut faire une recherche sur tous les livres, périodiques , cédéroms et autres documents acquis par les bibliothèques danoises, soit environ 6-7 millions de titres, représentant des millions de documents.

2.5. Les bibliothèques :

Le concept de Bibliotek dk souligne le fait que c'est l'usager individuel qui choisit le document qu'il/elle veut et aussi l'endroit où il veut le consulter. C'est le réseau des bibliothèques dans son ensemble qui garantit que le document, de la façon la plus rationnelle et la plus économique possible, sera à cet endroit si le document n'est pas déjà dans les collections de la bibliothèque choisie. Chaque bibliothèque détermine son propre profil de services dans le cadre de la loi sur les bibliothèques. Ce qui signifie que les documents musicaux, les cédéroms... appartiennent à la catégorie des documents qui ne seront inclus dans le prêt entre bibliothèques qu'après le 1 janvier 2003.

Cela veut dire aussi que chaque bibliothèque a décrit de façon assez précise, dans bibliotek.dk, le service qu'elle offre à l'usager. Les questions sur la recherche et l'assistance pour utiliser bibliotek.dk sont dirigées vers la bibliothèque fréquentée par l'usager. Les questions sur une requête précise sont dirigées vers la bibliothèque que l'usager a choisi comme lieu de consultation.
Les bibliothèques participantes sont listées dans la rubrique *Biblioteksvejviseren*, dans bibliotek.dk.

2.6 Accès à d'autres services sur Internet :

Certaines bibliothèques danoises ont développé individuellement ou à plusieurs un certain nombre de services sur Internet. Les services qui ont une dimension nationale sont inclus sous forme de liens dans bibliotek.dk.

2.7 Technologie :

La coopération technologique entre les bibliothèques danoises a été basée dès l'origine sur les normes internationales , qui sont adaptées jusqu'à une certaine limite seulement aux conditions danoises. La base DanBib est construite en modules qui sont compatibles avec les systèmes de bibliothèques disponibles sur le marché danois. Dans le développement de bibliotek.dk, il n'y a pas eu de demande technologique particulière envers les bibliothèques participantes, les systèmes existants ont été utilisés sans modification et donc sans conséquences économiques importantes.

Comme pour tout le réseau des bibliothèques danoises, bibliotek.dk a été construit pièce par pièce, module par module. L'intention n'a jamais été de constituer un produit complet, fermé, mais au contraire un processus continu. Avec la technologie actuelle, on ne peut indiquer le statut de prêt du document dans bibliotek.dk. Mais via bibliotek.dk, on peut passer dans le catalogue de la bibliothèque concernée et trouver l'information. Cela a été une question de choix, dans la mesure où la norme Z39.50 pour l'enregistrement des prêts, par exemple, n'est pas encore implantée au Danemark (les premières implantations sont prévues cet automne).

2.8 Gratuité ou non :

La question d'un petit paiement pour l'usage de bibliotek.dk a été discutée lors du passage à la Loi sur les services de bibliothèques. Il a été suggéré un tarif de 5,00 DKK (un peu plus de ½ USD) par interrogation. Le résultat des délibérations a été que la Loi sur les services de bibliothèques contient une clause qui permet au ministère de la culture de décider que les bibliothèques doivent faire payer l'usage de bibliotek.dk. Les services, qui sont disponibles sur place, sont en principe gratuits pour l'utilisateur final.

3. Ouverture et usage

Bibliotek.dk a été ouvert lors de la rencontre annuelle du service national des bibliothèques danoises avec les directeurs de bibliothèques, le 31 Octobre 2 000, par le ministre des affaires culturelles. A cette occasion, un petit communiqué de presse a été rédigé et une entrevue plutôt informelle avec la presse a été organisée, mais l'un dans l'autre, il n'a pas été fait beaucoup de publicité à ce service unique. Cette stratégie a été délibérée, dans la mesure où nous ne pouvions pas encore dire comment bibliotek.dk fonctionnerait pratiquement, même s'il avait été testé tout au long de son développement. Nous avons vu au Danemark beaucoup de lancements de nouveaux projets spectaculaires en technologies de l'information qui n'ont pas pu répondre aux attentes une fois qu'ils étaient ouverts.

Bibliotek.dk a été lancé, et ça a marché !

3.1. La campagne d'information

Au printemps 2 001, nous avons lancé une campagne d'information sur la Loi sur les services de bibliothèques et une grande partie de la campagne s'est concentrée sur bibliotek.dk. La campagne a consisté en :

- des bandes publicitaires sur des sites Internet sélectionnés ;
- un concours avec des questions dont les réponses se trouvaient sur bibliotek.dk ;
- des cartes postales distribuées au domicile ;
- des « Chilicards » (cartes postales diffusées dans des institutions d'éducation) ;
- « GoCards » (cartes postales diffusées dans les cafés etc.) ;
- ½ mil. de dépliants dans les bibliothèques.

3.2 Usage

Quel usage a été fait de bibliotek.dk jusqu'à présent ?
Quand bibliotek.dk a ouvert, le nombre de requête n'a pas été important, comme cela était prévu. Le premier mois, novembre 2000, 16 600 requêtes ont été faites, dont 14 000 pour les bibliothèques publiques et 2 000 requêtes pour les bibliothèques de recherche.
En avril 2 001, il y a eu environ 38 500 requêtes, 33 000 pour les bibliothèques publiques et 5 000 pour les bibliothèques de recherche.
Depuis son ouverture, bibliotek.dk compte plus de 127 000 requêtes, 108 500 pour les bibliothèques publiques et environ 18 000 pour les bibliothèques de recherche.

3.3 Qu'est-ce qui est demandé ?

Nous ne disposons pas d'une étude, mais toutes les bibliothèques publiques sont d'accord sur le fait que les documents musicaux (CD et autres) des bibliothèques de recherche sont particulièrement demandés. Un échantillon aléatoire montre que le prêt entre bibliothèque depuis les bibliothèques de recherche vers les bibliothèques publiques a considérablement crû. Ce point excepté, les requêtes sont assez ordinaires, pour des documents assez ordinaires.

3.4 Qui utilise bibliotek.dk ?

Nous n'avons pas de statistiques, mais la réaction spontanées des bibliothèques est que les étudiants de tous les niveaux sont des usagers fréquents, ce qui n'est pas une surprise.

3.5 Les attentes et les souhaits des usagers :

Comme je l'ai dit précédemment, il est clair que nous avons essayé de répondre aux besoins des usagers tout-au-long du développement du projet, même s'il a été difficile, dans les toutes premières étapes du projet, d'obtenir des usagers qu'ils considèrent vraiment ce qu'ils voudraient si tout-à-coup ils avaient accès à toutes les collections des bibliothèques danoises. Je voudrais citer ici quelques réactions d'usagers :
« *Super*!!! Je n'ai pas encore essayé de commander des livres, mais si vous tenez vos promesses, alors c'est un outil vraiment formidable. »
« J'ai essayé quelques recherches, et je suis impressionnée. Ca marche vraiment très bien »
« Merci : the site est une des meilleures réalisations du secteur public depuis longtemps ».
« Cela fait longtemps que je me demandais s'il était possible de faire une recherche dans une base de toutes les bibliothèques . Et voilà, c'est fait, et on peut même commander le document, c'est parfait ! En un mot, bibliotek.dk est l'endroit où chercher et trouver des réponses»

3.6 Les changements induits dans les bibliothèques :

Quelles sont les conséquences pour les bibliothèques ?
Sans aucun doute, bibliotek.dk a accru le nombre de requêtes dans les bibliothèques – et cela est particulièrement vrai dans les bibliothèques publiques. Nous ne pouvons pas encore dire de façon certaine que cela va entraîner un accroissement des prêts et des prêts entre bibliothèque, il faut attendre les statistiques 2001. Ce qui est sûr, c'est que les documents traditionnels (livres, périodiques...) resteront centraux encore de nombreuses années dans les bibliothèques danoises. Dans les futurs développements de bibliotek.dk, l'accent sera mis sur la rationalisation de ces prêts entre bibliothèques générés à l'initiative de l'usager.

4. Perspectives :

Mon point de vue est que le bibliotek.dk d'aujourd'hui n'est qu'un début. Les pages Internet vont être développées en coopération avec les partenaires concernés, et il serait fou d'essayer de prédire ce que sera bibliotek.dk au final. Voici les développements déjà prévus :

- développement d'une meilleure interaction entre le système local de la bibliothèque et bibliotek.dk ;

- développement – en coopération avec les éditeurs et les libraires – d'un bouton « achat », c'est-à-dire un lien qui permettent à la fois d'acheter sur Internet ou chez des libraires locaux ;
- une meilleure recherche par sujets ;
- une recherche intégrant les ressources sur Internet collectées par un service spécialisé. Et beaucoup plus encore.

Les améliorations et la rationalisation pour les bibliothèques seront prioritaires à la fois pour bibliotek.dk et pour DanBib qui est encore un outil professionnel pour le personnel.

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Professional Group: Document Delivery and Interlending
Joint Meeting with: -
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Simultaneous Interpretation: -

Interlibrary Loan in Mexico: two solutions to an age-old problem

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Abstract:

In spite of the great strides that have been made in recent years in improving Mexico's transportation and communication systems, obtaining material through interlibrary loan is still often difficult. This problem is exacerbated if the libraries involved are in different parts of the country or, even worse, if one of the libraries is located in another country. This paper focuses on two relatively small but successful programs that have been organized by the Grupo Amigos and the Transborder Library Forum (Foro). Both programs are important due to their international focus, but the latter program is particularly interesting due to changes that are being made at the Mexican coordinating library to allow end users to prepare their own ILL requests via the library's Web page, thus potentially speeding up the ILL process and giving the end users a more dynamic role in creating modern and efficient library services. The two programs will be compared and the authors will speculate on the future of interlibrary loan in Mexico.

1. INTRODUCTION

In this paper we will examine two interlibrary loan programs that operate between U.S. and Mexican libraries. The first is run by the Grupo Amigos and the second is a program established by the Transborder Library Forum or Foro.

2. THE GRUPO AMIGOS

The Grupo Amigos is a group of 13 Mexican libraries, principally located in the Mexico City metropolitan area, and 28 U.S. libraries. The group was formed in 1989 under the auspices of the University of Texas at El Paso (UTEP) and the Instituto Tecnologico Autonomo de Mexico or ITAM to provide interlibrary loans. Robert A. Seal, who was then the University Librarian at UTEP, played a key role in establishing the group. Member libraries include those of some of Mexico's most prestigious universities and research centers as well as the libraries of major private and public universities in the U.S. Southwest. Since its inception, Grupo Amigos has received ample support from the Benjamin Franklin Library, which is the U.S. Embassy library in Mexico. The Franklin Library has played a critical role in sending books back and forth between the U.S. and Mexico, thus avoiding the need to rely on Mexico's often slow and unreliable postal service. This interlibrary loan program has also supported a document delivery service via the Franklin Library's mail service, fax and Ariel software.

Grupo Amigo activities have been coordinated on the Mexican side on a rotating basis, with different member libraries coordinating the program for two-year periods. It was first coordinated by the ITAM, then by the Colegio de Mexico, the Centro de Investigación y Docencia Economicas or CIDE, and later by the University of the Americas. The program is currently coordinated by the campus located in the State of Mexico of the Instituto Tecnológico y de Estudios Superiores de Monterrey, commonly known as the Monterrey Tec. On the U.S. side, the library at UTEP has played a permanent role as coordinator.

During the program's first five years, Mexican libraries borrowed heavily from their U.S. counterparts. This high demand later declined as Mexican libraries began to have OPACs and were able to provide more efficient resource sharing on a local level.

Recently, the Mexican members of Grupo Amigos have begun to focus their attention on other activities, such as providing continuing education courses and the organization of a major congress at the University of the Americas in Puebla in February, 2000. A second congress is being organized for 2002. You can find more information about the Congreso Amigos 2002 at http://www.udlap.mx/fido/amigos/

Some of this group's other achievements include the following: (1) purchase of the Ariel software as a consortium; (2) establishment of a procedure to request interlibrary loans first by fax and later by e-mail and (3) recognition by library administrators of the need to provide staff training on copyright legislation on a national and international level.

3. THE TRANSBORDER LIBRARY FORUM

The Transborder Library Forum, has also established a program to promote interlibrary loan between U.S. and Mexican libraries. It has used somewhat different strategies and has up to now focused exclusively on providing journal articles and book chapters.

In 1990, the Transborder Library Forum or Foro held its first meeting in Rio Rico, U.S.A. to promote the exchange of ideas and establish cooperative projects between libraries in the United States, Mexico and Canada. The Foro's annual meetings are alternatively held in the United States and Mexico. It has no headquarters and no officers. Each meeting is organized by a dedicated group of volunteers. The XI

Transborder Library Forum was held in March in Hermosillo, Mexico. Next year's conference will be held in Laredo, U.S.A.

4. THE TRANSNATIONAL INTERLIBRARY LOAN PROGRAM

The Foro's Interlibrary Loan Program is officially denominated as the "Transnational Interlibrary Loan Program". The program was originally designed to support the needs of smaller libraries, including academic, medical and special libraries. It was designed both to promote interlibrary loan between U.S. and Mexican libraries, as well as to stimulate ILL activity between libraries located in different parts of Mexico.

Interlibrary loan in Mexico functions almost exclusively at a local level. As early as 1995, a number of librarians began to express an interest in creating a project that would help them obtain journal articles not readily available in local libraries. Many hoped that U. S. academic libraries would be willing and able to help their Mexican colleagues by providing copies of articles available only in U. S. collections.

As a result of this interest, Robert A. Seal and Daniel Mattes later created a "Proposal for the Creation of a U. S. – Mexican Interlibrary Loan Working Group". In the proposal, it was expressly stated that among the goals of the program was the desire to strengthen interlibrary loan within Mexico as well as between the U. S. and Mexico. It was also agreed that articles would be sent between libraries via the Ariel software or by fax where Ariel was not available.

These same two librarians later prepared a new document entitled "Suggested Guidelines for Transnational Interlibrary Loans" and were encharged to organize and coordinate a pilot project which included 22 Mexican library participants and 11 U. S. library participants. All of the U.S. participants were academic libraries; Mexican participants included academic, medical and special libraries.

An evaluation was presented in 1998 on the basis of the short trial period mentioned previously. The group decided that the pilot project had been successful and recommended that it become a permanent program. 49 libraries are currently registered as participants in the Foro ILL Program, including 39 Mexican libraries and 10 U. S. libraries. 31 other Mexican libraries have participated in the program in an unofficial and sporadic manner.

5. NEW STRATEGIES

In response to basic needs expressed by program participants, since March, 2001 the library of the Universidad Anahuac has dedicated part of its Web page to the Transnational Interlibrary Loan Program. At this site one can find the guidelines under which the program operates and a directory of participating libraries. There is also a form which allows the end user to formulate his or her own interlibrary loan request.

The URL for the University Anahuac Library's main Web page is

http://www.anahuac.mx/biblioteca/. Information specific to the program can be found under "Services".

We plan to hold workshops to show users how the program works and thus empower them so that they can use the form to directly request materials from appropriate lending libraries. This means bringing about a major change of library user culture, since most of our users are accustomed to receiving personalized service by the librarians. It's also important to mention that at this point our users typically still do not provide complete bibliographic information in their requests for new acquisitions. It goes without saying that they have very little experience in locating material in other libraries via Internet and deciding which library can best help them. All of these abilities will have to be taught in the workshops or the program will become unworkable. If this process works at the Universidad Anahuac library, we will propose that other program participants attempt to implement similar strategies.

The library at the Universidad Anahuac is currently working with the univeristy's Department of Academic Services to establish an Internet discussion list to improve communication between program participants.

6. CONCLUSIONS

The Grupo Amigos and the Transborder Library Forum have established different but complementary programs to meet the need of sharing information resources between libraries in Mexico and the United States. The Grupo Amigos program provides both books and documents; the Foro's ILL program deals almost exclusively with documents. The Grupo Amigo's program continues to work more or less as it has since its inception, with the end user playing a relatively passive role. The Foro's program is looking for ways to empower end users to make their own requests directly to lending libraries, thus giving the end user the chance to take a more dynamic role in the library and thus enjoy speedier and more efficient services. It is our hope that human creativity and technological innovative will provide the elements needed to improve these and other forms of resource sharing between libraries in the United States and Mexico. We do not foresee a library without walls or without librarians, but we do believe users are willing and able to play a more active role in creating the libraries they expect and deserve.

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We're still here:
Traditional ILL after OhioLINK Patron-initiated requesting and Ejournals

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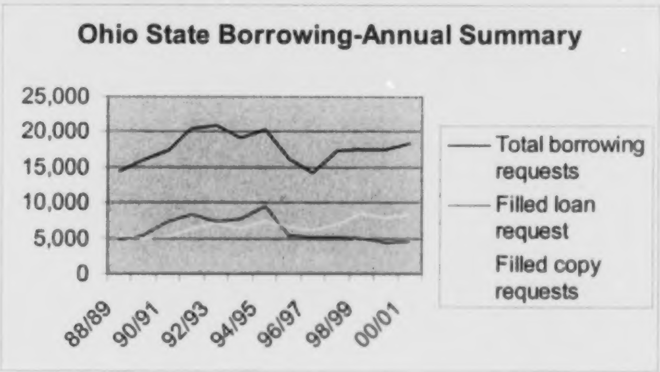
USA

OhioLINK has been a leader as a consortia providing a variety of services to an state-wide user population of college and university libraries. Its central function is the union catalog of materials held by its member institutions (Ohio Board of Regents 1989, 4) but an increasing number of services make OhioLINK more than just its catalog. At this time, OhioLINK has 79 institutional partners and has been recognized most widely for its patron-initiated circulation function. The catalog allows patrons to search for material held at all the institutions easily and see the availability of the material at any library..

Patron-Initiated Book Requesting

Patrons at any of the institutions can request a book that is available from any of the other institutions, using the circulation system after a search of the central catalog rather than their interlibrary loan office. A courier service delivers the books within a couple of days to the borrowing patrons library or campus office, so the service is much faster than traditional interlibrary loan services ever were.

Figure 1. Ohio State: Interlibrary Loan Borrowing—Annual data



A look at what happened to traditional interlibrary loan borrowing at our institution illustrates the effect of this service on traditional ILL. Soon after the Ohio State University turned on patron-requesting in May, 1995, the number of requests to our Interlibrary Loan office and the resulting number of loan requests filled, dropped dramatically. Figure 1 graphically illustrates that drop in requests and filled loans at Ohio State while Table 1 shows the numbers. Over the course of the last 6 years ILL borrowing of returnable has remained steady since that initial drop-off---and tends to be materials such as dissertations/theses, microfilm and non-English books, rather than English-language books.

So while in 1995, we filled 9,544 loan requests, the following year we filled only 5,318 (see Table 1). Last year's circulation data shows that Ohio State patrons borrowed 70,192 books through OhioLINK's patron-initiated borrowing service, contrasted with the 4,362 returnables borrowed through our office. We're still here, but compared to OhioLINK book requesting, we are a much-smaller-scaled operation. Offer a service like patron-initiated requesting and patrons will use it, but it doesn't replace much of the ILL activity, its a separate demand and supply.

Table 1. Ohio State: Interlibrary Loan and OhioLINK borrowing annual data.

	OhioLINK	**Traditional Interlibrary Loan**			
Year	OSU patron-borrowing	Borrowing			Lending
		Requests	Filled loans	Filled copies	Requests
88/89		14,381	4,781	5,318	32,282
89/90		15,878	5,378	4,856	29,864
90/91		17,314	7,305	5,099	33,856
91/92		20,540	8,363	6,393	34,719
92/93		20,781	7,315	6,995	34,240
93/94		19,045	7,769	6,390	37,551
94/95		20,310	9,544	7,433	42,606
95/96	47,152	16,070	5,318	6,439	47,740
96/97	68,028	14,102	5,069	6,016	49,161
97/98	66,029	17,310	5,168	6,909	53,117
98/99	66,859	17,491	4,873	8,381	49,688
99/00	70,192	17,553	4,362	7,948	52,661
00/01*	60,618	18,328	4,498	8,355	55,000

* Year 00/01: OhioLINK shows actual data for 10 completed months of year, for ILL, annualized estimates are given.

So although patron-initiated borrowing fills demand for books, for journal articles the OhioLINK strategy has been the acquisition of collections of ejournals for the whole system rather than developing a service using the journal resources that already exist on paper in the partner institutions. David Kohl describes the strategy, 'Our approach is jointly to purchase system-wide rights to the full-text electronic versions of the articles." (Kohl 1998, 68). He noted that this system provides an alternative to the "costly and time-consuming" activity required to retrieve articles from the stacks and scan or send out those articles.

Ejournals and the Electronic Journal Center

OhioLINK has developed the Electronic Journal Center, an archive of ejournals which have been licensed by OhioLINK. At this time, it contains 4,020 serial titles, with 2.6 million articles from 14 publishers---but the numbers change almost daily. Academic Press and Elsevier were the first publishers included in the program (data from the OhioLINK staff website).

The question that came to our mind as these contracts have been signed and the titles became available, is what would be the effect on ILL of this new type of patron-initiated service? Would it follow the patron-initiated borrowing model that we experienced for books and diminish our traditional ILL activity? With ejournals, our patrons can get-it-themselves using the Electronic Journal Center and can bypass using interlibrary loan services as well as their local library. Milton has reported the increase in full-text usage contributed to the decline in interlibrary loan activity at her institution.

The answer is: We haven't seen the number of requests we get at Ohio State University in Interlibrary Loan diminish yet.

Looking again at Table 1 where you can see that the number of **total borrowing** requests we get is still increasing as is the number of filled copy requests.

Why is this? Another service OhioLINK provides is access to a large number of databases. Our patrons use these tools which frequently result in ILL demands if we do not own the journal. As our access to a larger number of more specialized databases increases, the demand for more unusual journals seems to increase as well. But at the same time as these changes have taken place has been the rise of the Internet, the largest finding tool, giving our patrons access to a world of references. We are seeing more requests where the source of the citation, whether good or bad, is the Internet. At the same time, we also use it as a verification tool ourselves. In short, as the number of identification tools increase or become more convenient, we find we are getting requests for more things that are more difficult to verify or find a source for.

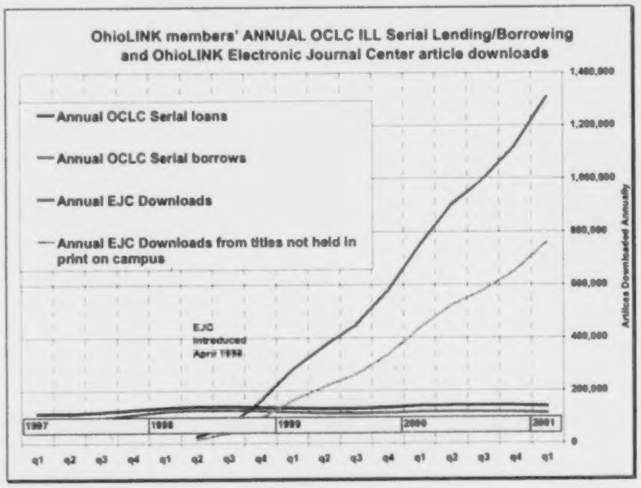
Another reason we may not have seen our access to ejournals diminish interlibrary borrowing yet, is all those ejournal titles didn't become available at one time Sally Rogers notes in her article on electronic journal usage (Rogers 2001, 27), in 1998 we had access to Academic and Elsevier publications numbering 1200 and by May 2000, we had 3,000 titles.

Our own environment may play a role as well. At Ohio State our interlibrary loan electronic requesting is not available to undergraduates, so while ejournals may serve to reduce requests at institutions that serve a large number of undergraduates, at Ohio State, our ILL department has more limited service. But

Rogers found that OSU patrons liked the 24-availability and easy access of ejournals, since we offer authenticated remote access.

In the case of ejournals, we haven't seen the number of interlibrary loan requests reduce, but we can see the dramatic surge in the use of electronic journal articles. So let's look at the use of the EJC and compare it to Interlibrary loan activity throughout OhioLINK, rather than only at Ohio State.

Figure 2 OhioLINK EJC downloads contrasted against OCLC ILL activity throughout OhioLINK



The author would like to thank Tom Sanville, Director of OhioLINK, for providing this figure. May, 2001

Here we see interlibrary loan activity from all OhioLINK schools (OCLC ILL subsystem data reported) contrasted with the use of the Electronic Journal Center, downloads of ejournal articles. Note traditional ILL, hovers flat-lined across the bottom of the figure. Little change in interlibrary loan activity is shown while a dramatic shift has been the use of this new technology over the last two years.

An interesting aspect of this chart, meriting consideration, is the difference between the two steep lines. The top line, of total downloads, is shadowed by a line illustrating downloads of titles not held in paper at the patron's institution. The space under that line represents the use of titles new to campus users while the space between the two lines suggests the use of titles already on campus, what we would call patron-convenience factors—things like 24/7 availability, remote rather than campus use, etc. It looks like at least half of the downloads are done by patron's whose institutions subscribe to the title in paper as well.

Lending activities

While we have focused on the effects of patron-requesting of books and the EJC for our patrons, what has been the effect of OhioLINK ejournals on lending?

BEST COPY AVAILABLE

One aspect is that the OhioLINK partnership provides for all the members to give free interlibrary loan to each other. As a result we use one another as sources for obtaining photocopies for our patrons. In her thesis on OhioLINK resource sharing at the University of Toledo, Pat Breno noted the change in percentage of photocopies filled in-state from 22% in 1992 (pre OhioLINK) to 80% in 1998 (Breno 1998, 35). At OSU, currently only about 32% of our photocopy borrowing comes from an OhioLINK partner so there remain strong institutional differences. While the OhioLINK agreement brought us a large number of reciprocal relationships to use, too few OhioLINK libraries use ARIEL. But we do see in lending an increase use of the partnership since at OSU, in 1995 we filled 3,079 copy requests for our OhioLINK partners; in 2001 it will be over 5,000.

So what happens to traditional interlibrary services as OhioLINK provides more options for patrons obtaining materials? Scott Van Dam described ILL as occupying a distinctive "niche", as a specialty operation, one of a set of solutions to obtaining material for patrons. Even today that description sounds right for our borrowing activity of returnables, as OhioLINK patron-initiated requesting fills the majority of patron loan needs and ILL fills in the gaps. But for photocopies, I wouldn't consider our work a niche business yet; while we still do some highly specialized work, it is still a volume business. In numbers it can't compete with the Electronic Journal Center, but we may see a future where our patrons have access to ejournals of a larger set of major publishers, as well as a migration of publishing from associations to those publishers. Interlibrary loan may fill "what's left" and become the niche business Van Dam described. Although our numbers are dwarfed by the scale of OhioLINK services, patron-initiated borrowing or electronic journal downloads, our services still maintain a viable role within the growing constellation of services offered.

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Union Catalogs and virtual Union Catalogs – repositioning Interlibrary Loan

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Abstract:

Libraries in the United States share a long history of developing consortial arrangements for resource sharing. This paper explores the use of union catalogs and virtual union catalogs in the United States to support resource sharing and provides an overview of a project that links disparate catalogs among members of an academic consortium and a statewide regional library network. When fully implemented, the Virtual Catalog/ Direct Distance Borrowing Project, funded by the Massachusetts Board of Library Commissioners and administered by the Boston Library Consortium, will enable patrons to search and request from over 56 million volumes.

Introduction

Libraries in the United States share a long history of developing consortial arrangements for resource sharing. In the early 80s members relied on bibliographic utilities such as OCLC, RLG, and WLN to view the holdings of their reciprocal partners. While this is an advance from earlier times when libraries checked book catalogs such as the National Union Catalog or microfilm listings, it does not meet the needs or expectations of today's patrons. In addition, it is an expensive operation. The utilities may charge for the use of the interlibrary loan component, and as the ARL/RLG study of 1993[1] noted, staff expense adds greatly to the transaction cost.

How can patrons obtain items that are not held by their home institutions in an efficient and cost-effective manner and what role can consortia play in meeting the patron's needs? Consortia have selected a multitude of methods to support resource sharing, especially the sharing of returnables. This paper will explore the use of union catalogs and virtual union catalogs in the United States to support resource sharing and provide an overview of a project that links disparate catalogs among members of an academic consortium and a statewide regional library network.

NAILLD Project

The Association of Research Libraries North American and Interlibrary Loan Document Delivery Project (NAILLD) promotes developments that will expedite delivery of materials to patrons at a cost that can be easily borne by libraries.[ii] The NAILLDD Project envisioned an interlibrary loan system from the patron's perspective. This system would

- have transparent access to the most relevant information through appropriate local and remote library catalogs, citation databases, and electronic resources,
- transfer bibliographic citations or details about non-bibliographic items into electronic requests or orders,
- pass requests or orders through the library online system to determine the local availability of the item,
- depending on the user's choice and local policy, direct the request or order to one of a range of suppliers including document delivery suppliers, or a local or remote library interlibrary loan/document delivery department,
- communicate electronically with the chosen supplier, and
- receive the print materials, multimedia, data, or full text/full image copy of non-returnable documents directly at their desk or workstation. [iii]

Union Catalogs

One method consortia have used to embrace this vision is through the establishment of union and virtual union catalogs. The union catalog combines the resources of consortial members, sometimes in a single bibliographic record with holdings attached. Lynch makes the following distinctions among union catalogs: Commercial services such as OCLC, RLG and WLN represent shared cataloging activities that do not have real time links to circulation data. Union Catalogs, such as MELVYL, are an outgrowth of shared cataloging, and shared union catalogs that are integrated library systems shared by libraries.[iv]

One of the earliest versions of the shared approach was ILLINET Online, a consortia of academic and research libraries in Illinois. An early version of this consortia's catalog consisted of a database that held a single bibliographic record fed from OCLC data. Records from the libraries were deduped and holdings data linked to the record. The records were also linked to each library's circulation database, which indicated availability to the patron. Patrons could then use this function to request items (returnables only) directly from consortial partners. Since the patron database was shared, authentication was not an issue. The patron's home library however, was unaware of a patron's request until an item was received for a patron. Also, patrons often forgot whether a request had been submitted directly on the system or through traditional interlibrary loan. It was however, a popular system, as evidenced by a dramatic increase in borrowing.[v] Data Research Associate's Classic System later replaced this system. In this version, the patron searches the union catalog for an item, places the request, which is then routed to one of the consortial members according to a variety of algorithms that supports load leveling. The lending and borrowing libraries have access to the requests and allowing them to track the request's progress through the system.

Other United States consortia have selected similar approaches to a shared union catalog. One of the most well known is OhioLink while one of the most recent consortia to select the shared union catalog approach is Mobius, a consortia of academic libraries in Missouri.

Libraries of the University of California selected the union catalog approach. MELVYL® is a centralized database representing the cataloging from libraries that participate in the California Digital Library. As Coyle notes, MELVYL is a document discovery tool for end-users.[vi]

Virtual Union Catalogs

The virtual union catalog differs from the union catalog in a variety of ways. It links disparate catalogs through Z39.50 protocol, represents a harvesting of the various databases and does not represent a uniform set of indexes and search functions. Local system downtime can impact the catalog's availability, local catalogs must support additional capacity, and Z39.50 does not support deduplication of records. Version 3.0 supports a sorting function however, not all systems support this version. [vii]

Libraries that are unable to participate in a shared union catalog find the virtual union catalog a viable alternative for resource sharing. The Boston Library Consortium (BLC), an organization of 16 academic and research libraries in Massachusetts and Rhode Island, is participating in a virtual catalog project funded in part by the Massachusetts Board of Library Commissioners[1]. The project links the disparate catalogs of the BLC membership with those of the Massachusetts library Networks. Once software installation is complete, BLC patrons will have the ability to search over 25 million volumes among the combined BLC collections and will determine an item's availability instantaneously. Once the networks are added to the project, the searchable collection will reach over 56 million volumes.

The project, using epixtech's URSA, links disparate catalogs through software that emulates interoperability. URSA simultaneously searches across disparate integrated library systems and de-dupes requests based on designated criteria. The local catalogs are searched using Z39.50 protocol, display an item's holdings and current availability, and authenticate patrons. The software is flexible and permits requesting and lending through mediated or unmediated techniques.

The project is unique in that it is a multi-consortial partnership linking disparate consortia. The implementation process began with a phased approach to the Virtual Catalog/Direct Distance Borrowing Project. An early implementers group comprised of BLC members University of Massachusetts-Boston, Marine Biological Laboratory/Woods Hole Oceanographic Institute, Wellesley College, and Brown University began using the catalog in staff mode in the fall of 2000; patrons began using the system at the beginning spring semester 2001. Massachusetts Network implementers include Minuteman Library Network and the Metro Boston Library Network, representing collections of 8 million volumes. The next phase of the project includes

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[1] The member institutions of the BLC are: Boston College, Boston Public Library, Boston University, Brandeis University, Brown University, Marine Biological Laboratory/ Woods Hole Oceanographic Institution, Massachusetts Institute of Technology, Northeastern University, ,State Library of Massachusetts, Tufts University, University of Massachusetts Amherst, University of Massachusetts Boston, University of Massachusetts Dartmouth, University of Massachusetts Lowell, University of Massachusetts Worcester, and Wellesley College.

University of Massachusetts Dartmouth, University of Massachusetts Lowell, and University of Massachusetts Worcester with a planned patron implementation for summer. Other consortium members and the remaining networks will join the project in 2001 and beyond.

The Consortium serves as the project's fiscal agent, offers leadership to the membership, assists them with the transition to a patron initiated environment, helps identify emerging technologies, and attemps to anticipate the needs of the members and their constituents. The consortium is continually investigating new methods to deliver information, suggesting new communication methods, and working toward balancing advocacy with inquiry.

The project has instilled a deep sense of collaboration among the consortia membership and strengthens our attempts to share resources more aggressively. It serves as a calculated response to the increase demand for access and providing materials in a timely and cost effective manner. It also supports many of the best practices suggested by the NAILLD project, including the redesign of the interlibrary loan, improvement of mediated services, and the provision of unmediated services in a networked environment. This partnership has provided new opportunities for the patrons, has extended the library beyond the building, and made us rethink the way knowledge is managed.

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IFLA Core Activity for Universal Bibliographic Control and International MARC (UBCIM) – Review of activities 2000-2001

Marie-France Plassard
Programme Director, UBCIM

UBCIM like the other four core programmes of IFLA is now part of IFLA seven core activities. We experience, as the other former core programmes do, a restructuration and some financial difficulties. We, nevertheless, continue to work towards fulfillment of our main goals and there is close cooperation with the Division of Bibliographic Control.

May I remind you that UBCIM aims at creating and maintaining standards for machine-readable exchange, provides a focus for IFLA activities in the field and through its publication programme, disseminates relevant information. UBCIM is in charge of the maintenance and the promotion of the Universal MARC format, UNIMARC, through a group of experts, the Permanent UNIMARC Committee.

One of the main achievements of the Division and of UBCIM is, as you all know, the International Standard Bibliographic Description (ISBD). We are working together on disseminating these standards even further by posting all ISBDs step by step on the IFLANET. The ISBD(A)[1], (ER)[2] and (G)[3] are accessible so far. The ISBDs have been translated into 26 languages and we have posted lists of ISBDs in 12 languages so far.[4] We would welcome additional lists.

One of the main goals of UBCIM is the promotion and development of authority control at the international level. On this too we work with the Division through a joint Working Group "Functional Requirements And Numbering of Authority Records" (FRANAR). Françoise Bourdon, the Chair of FRANAR, will report herself on these activities.

The promotion and maintenance of the UNIMARC format through the Permanent UNIMARC Committee (PUC)[5] continues to represent a major part of our activities. During the 12th meeting of the PUC in Vilnius last March, elections took place and Mirna Willer, from the National and University Library of Croatia and Jay Weitz, from OCLC, were respectively re-elected Chair and Vice Chair of the new Committee.

We had the satisfaction of knowing that one of our longest and most difficult tasks, the revision of the UNIMARC format for Authorities, published in 1992, had been successfully completed. The second revised and much enlarged edition of UNIMARC/A appeared in March and is available from K. G. Saur.[6]

The Concise UNIMARC format for Classification[7] was posted for worldwide review (November 2000 – May 2001) and we are in the process of formalizing it.

Another new format will soon be posted for comments: the UNIMARC format for Holdings, being drafted by a Working Group chaired by Rosa Galva, from the National Library of Portugal.

Another subgroup of the PUC is considering additions to UNIMARC for description of music material. It is chaired by Cristina Magliano, from ICCU in Rome.

And we continue to make additions and changes to the UNIMARC bibliographic format, mostly in response to requests from users. The fourth update to the UNIMARC Manual – Bibliographic Format is scheduled for spring 2002.

If you wish to hear more about these developments, as well as other issues on standardization and information exchange, please come to the joint Workshop Division of Bibliographic Control / UBCIM and Permanent UNIMARC Committee scheduled on Thursday between 8:30 and 17:00.

The new edition of UNIMARC/A was partly responsible for an invitation I received from the National Institute of Informatics (NII) in Tokyo after I had met Professor Naito, from NII, in the Deutsche Bibliothek last year. NII is involved, in cooperation with the National Diet Library (NDL), in a project aiming at a standardized and harmonized cumulating of the name authority data in Chinese, Korean, and Japanese (CKJ) languages in other countries. The project target is an interchange format which conforms to UNIMARC/A. I was thus invited to a regional Workshop on CKJ authorities at NII in Tokyo where I gave lectures on IFLA work in authority control and the new edition of UNIMARC/A. I also had the opportunity to visit the National Diet Library and report on IFLA current projects in the field of bibliographic control.

Apart from this I have represented IFLA at several meetings, e.g., ISSN Conference of Directors (Washington, September 2000), ISBN Panel Meeting (Berlin, October 2000), CERL (Consortium of European Research Libraries), (Padua, November 2000), and ELAG (European Library Automation Group), (Prague, June 2001). ISBN meetings have provided a welcome opportunity to meet colleagues from the book trade and those of you who will attend the Workshop on Thursday will hear a presentation about ONIX, the Book Trade Product Metadata Standard, by Brian Green, from Book Industry Communication (BIC) who is interested in cooperating with IFLA in the field of authority control. Alan Danskin, from the PUC, will report on mapping ONIX-UNIMARC.

I have already mentioned at the beginning our publications programme. The UBCIM New Series (monographs) is published and distributed by K. G. Saur but we also have a programme of publications on demand distributed by the office.

Apart from UNIMARC/A (which is volume 22 in the New Series), Saur published as volume 23 the revised edition of GARE (Guidelines for Authority and Reference Entries), titled GARR (Guidelines for Authority and Reference Records (GARR)[8]. Volume 24 will be the proceedings of the satellite meeting on "Subject Retrieval in a Networked World" which took place at OCLC last week. Our last publication on demand is Structures of Corporate Name Headings[9], final report of the Working Group on the revision of FSCH (Form and Structure of Corporate Headings), which was also posted on the IFLANET in January.
UBCIM publications have been translated into 28 languages. Although we are not directly involved in translations we have appointed coordinating centres in the countries concerned which liaise with us and I seize this opportunity to remind you that, for each planned translation, a permission form should be submitted to UBCIM.

Lastly, International Cataloguing and Bibliographic Control (ICBC), the quarterly journal of UBCIM continues to publish IFLA reports and conference papers, commissioned and unsolicited articles. The office welcomes all relevant contributions and news items. Tables of contents are posted on the IFLANET[10].

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[1] http://www.ifla.org/VII/s13/pubs/isbda.htm

[2] http://www.ifla.org/VII/s13/pubs/isbd.htm

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[4] http://www.ifla.org/VI/3/nd1/isbdtran.htm

[5] http://www.ifla.org/VI/3/puc.htm

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[7] http://www.ifla.org/VI/3/p1996-1/concise.htm

[8] *Guidelines for Authority and Reference Records.* Formerly Guidelines for Authority and Reference Entries, recommended by the Working Group on an International Authority System, approved by the Standing Committees of the IFLA Section on Cataloguing and the IFLA Section on Technology. Second edition. Revised by the IFLA Working Group on GARE Revision. München: Saur, 2001. (UBCIM Publications – New Series, v. 23).

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Section on Classification and Indexing
Review of activities, 2000-2001

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Aim

The aim of the Section on Classification and Indexing is to act as a forum for users and producers of classification and subject indexing tools. Its terms of reference are to promote standardization and uniform application of classification and subject indexing tools by institutions generating or utilizing bibliographic records; to initiate and promote advice on research in the subject approach to information; and to disseminate research results through open meetings and publications.

Requirements for a Format for Classification Data

The Section has monitored and supported implementation of the recommendations of the Joint Working Group on a Classification Format of the IFLA Sections on Classification and Indexing and Information Technology. The chair is a member of the Working Group and has also attended meetings of the Permanent UNIMARC Committee by invitation. Implementation involves modification of the *USMARC Format for Classification Data* and development of a UNIMARC format for classification data. The work is essentially completed and comments were requested by May 31 2001. It should be approved at the Boston IFLA meeting.

Committee members mailing list

A mailing list for the Committee may used via CLASS@INFOSERV.NLC-BNC.CA

Guidelines for the construction of multi-lingual thesauri

The Committee initiated a project to draft new guidelines for the construction of Multi-lingual thesauri, to replace the current standard which is now over 25 years old. A Working Group has been set up, chaired by Gerhard Riesthuis (University of Amsterdam, The Netherlands) and an e-mail bulletin board has been set up for discussion. The Working Group met at Jerusalem and again in January in Frankfurt. There will be a further meeting at Boston, and work is progressing well.

Working Group on Subject Access of Web Sites and Digital Libraries

A Working Group on Subject Access of Web Sites and Digital Libraries was set up at Bangkok, under the chairmanship of Marcia Zeng. It has established a mailing list as a forum for discussion and will be meeting at Boston.

Satellite Conference

The Section is holding a satellite conference "Subject retrieval in a networked world" at OCLC, Dublin, Ohio immediately preceding the Boston IFLA. This is a joint initiative of the Section with the Section on Information Technology. Thanks are due to OCLC for agreeing to host this meeting and for their sponsorship. Abstracts of papers were solicited and reviewed and twenty-four accepted for presentation at the two day meeting. It is planned to publish the proceedings.

Division project on OPAC displays

Representatives of the Committee attended meetings of the Working Group at the Jerusalem IFLA and at a meeting held in Amsterdam later in 2000. The Section has maintained involvement in this project throughout the past year.

Programme for Boston conference

The Section has a full programme for Boston. For the Open Session the theme is "Education and knowledge organization". Four papers will be presented on the following themes:
Pat OYLER, Professor, Simmons College' Boston, USA."Teaching classification in the 21st century";
Winfried GÖDERT, Professor, Fachhochschule Köln, Germany. "Knowledge organisation and information retrieval in times of change – concepts for education in Germany";
Aida SLAVIÆ, Lecturer, University of Zagreb, Croatia: "Classification in a modern and sustainable LIS curriculum: the case of Croatia";
Dr Filiberto Felípe MARTINEZ ARELLANO, Coordinador del Colegio de Bibliotecologia, Universidad Nacional Autonoma de Mexico: "Issues on the teaching of subject retrieval at Mexican LIS schools"

All papers will be delivered in English.

The Section will also participate in the one day workshop organized by the Division of Bibliographic Control and UBCIM: "Information Exchange in the 21st Century: Formats and standardization".

Section newsletter

The section continues to publish a *Newsletter* for Section members, for members of the Standing Committee and for others interested in classification and indexing. Two issues have been published during the current year. This acts as a channel for imparting information about what is happening at national level and for sharing in the experiences of others. It is also an excellent forum for the discussion of matters of international concern relating to classification and indexing. Contributions are always very welcome. The Editor is Pia Leth, of the Swedish National Library, Stockholm.

Standing committee membership and officers

Membership of the Section at present stands at 103. The new standing committee has 19 members, representing 14 different countries. Ia McIlwaine and Edward Swanson will complete their terms of office as Chair and Secretary respectively at Boston, and elections will be held for both offices.

Co-operative projects

Ia McIlwaine (University College London) and Edward Swanson (Library Consultant) attended the meeting of the Co-ordinating Board of the Division of Bibliographic Control at the University of Minnesota, Minneapolis, USA in April 2001. Ia McIlwaine attended the November 2000 and March 2001 meetings of the Professional Board, in her capacity as Chair of the Division of Bibliographic Control.

The Section continues to cooperate with other IFLA Sections and Divisions and with the Permanent UNIMARC Committee in various projects and activities.

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Section de Catalogage

[Bilan 2000-2001 : rapport présenté lors de la réunion "Open Forum" de la Division du Contrôle Bibliographique, 65^{e} conférence annuelle de l'IFLA, Boston août 2001]

Maria Witt
Sécrétaire de la Section Catalogage 1997-2001

L'intérêt pour le catalogage et pour son harmonisation au niveau international est partagé depuis longtemps par des bibliothèques à travers le monde. La Section de catalogage est une des plus anciennes sections de l'IFLA et attire de plus en plus de membres .

Les buts et la vocation de la normalisation sont restés les activités principales de la Section dont les objectifs sont définis dans le Programme à moyen terme. Dans ce cadre, la Section s'est non seulement penchée sur le développement et la maintenance des normes catalographiques des documents traditionnels, mais aussi a tenu compte du développement exponentiel de nouveaux types de documents, comme par exemple les ressources éléctroniques. Elle a également développé une nouvelle approche de la description bibliographique , basée sur les besoins fonctionnels : les fameux "FRBR". Concernant les usages des catalogues informatisés, nous nous en sommes préoccupés en menant à bien le projet sur les recommendations pour les OPACs.

Tout au long de la dernière décennie nous avons pris également en compte les questions posées par la gestion des fichiers d'autorités, dont la cohérence est nécessaire pour une utilisation efficace des catalogues à travers le monde.

La Section travaille simultanément sur de nombreux projets (nombreux, car les membres du Comité Permanent sont nombreux), auxquels participent largement les collègues d'autres sections : la philosophie retenue étant celle de la coopération au sens large du terme. Dans les projets émanant de la Section Catalogage nous voulons impliquer encore davantage d'autres experts afin que le maximum des besoins soit couvert.

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Ainsi, il convient de souligner la coopération étroite avec les Sections Technologie de l'information, Publications en série, sans oublier évidemment les sections de notre propre Division IV, Bibliographie et Claassification/indexation, ainsi que le Programme fondamental UBCIM et le Comité Technique 46 de l'ISO.

Entre Décembre 1998 et Décembre 2000 le nombre de membres de la section a augmenté de 10 % : 149 membres en déc.98 et 163 – en déc.2000. Depuis plusieurs années le SC fonctionne avec un nombre maximum de 20 personnes (21 entre 199 et 2001), sans oublier les membres correspondants, les observateurs et membres honoraires, aussi actifs que des membres réguliers). Aux réunions de SC lors des congrès annuels assistent 15 personnes en moyenne en plus des membres du comité ce qui montre notre popularité et l'intérêt pour les questions transversales que nous traitons. Actuellement plusieurs continents sont représentés dans la Section et au sein du Comité Permanent, mais nous voudrions intéresser davantage des professionnels d'Asie et d'Afrique.

Quant aux responsables : la présidence est, depuis plusieurs années nord-américaine (les derniers présidents étaient : Olivia Madison, USA ; Ingrid Parent, Canada ; Barbara Tillett, USA), tandis que le secrétariat et l'information étaient européen (sécrétaires : Susanne Jougelet, France ; Maria Witt, France ; correspondant d'information : Kerstin Dahl, Suède) .

Une mise à jour de ces informations sera donnée lors de la conférence annuelle 2001, après les éléctions de la prémière réunion du Comité Permanent.

Pendant l'année académique, entre les congès annuels, différents groupes de travail poursuivent leur projets grâce aux divers moyens utilisés : correspondance éléctronique, télécopie, courrier lent, et aussi de fructueuses réunions "face à face". Nous aurons l'occasion, dans le cadre de la présente session, d'entendre plusieurs présidents de groupes sur les projets conduits, je ne veux donc pas les détailler. En outre pour d'autres précisions vous pouvez vous reporter aux rapports, comptes-rendus, communications prononcées lors de précedents congrès, tous présents sur IFLAnet en plusieurs langues.

La Section attache une grande importance à la propagation des projets achevés ou en cours ainsi qu'à la traduction des communications. Depuis des années, de nombreux efforts ont été fournis dans ce domaine et ont porté des fruits. En qualité de secrétaire responsable de cette tâche je tiens à remercier tous les collègues de la Section appartenant à "des aires linguistiques officielles" d'avoir participé activement aux traductions. Quant à la langue française, grand merci aux collègues d'autres sections de l'IFLA mais aussi aux professionnels en dehors de l'IFLA pour avoir répondu aux appels. Vous étiez les premiers à prendre connaissance des nouveaux textes, voilà l'avantage ! Dans ce chapitre bien évidemment je ne peux pas oublier les auteurs , préparant par eux-mêmes souvent deux versions linguistiques, ce qui a grandement soulagé la Secrétaire !

Dernières publications

Deux monographies ont été achevées depuis l'anné dernière

Le rapport final Form and Structure of Corporate Headings [1] édité par Ton Heijligers (Pays-Bas), est le fruit d'un groupe de travail mené pendant 6 ans dont l'objectif initial était de mettre à jour les règles existantes de FSCH . Cette idée a été abandonnée, laissant place aux règles générales devant aider les professionnels dans la création, l'échange et l'utilisation des fichiers d'autorité pour les noms de collectivités-auteur ; le concept d'un fichier d'autorité virtuel international, accessible de n'importe quelle bibliothèque du monde, à été longuement présent dans les discussions du groupe, qui a noué une coopération étroite avec le programme UBCIM et le projet de la Division IV - groupe FRANAR.

GARR – "Guidelines for authority records and references" à été publié également au début de l'année 2001, sous l'égide de Isa de Pinedo (Italie). [2] L'objectif de ce travail consistait à établir un ensemble des règles simples, couvrant tous les types de documents , musique, ressources éléctroniques, documentation législative...Il convient de noter que ce groupe a également eu des échanges étroits et fructueux avec les projets MLAR, FRANAR ainsi que l'UBCIM.

Publication des articles : comme tous les ans la Section Catalogage a profité des colonnes du trimestriel édité par UBCIM "International Cataloguing and Bibliographic Control" (ICBC) pour publier des communications du colloque précédent. Nous avons également pu nous ouvrir à un public plus large et être présent dans "IFLA Journal" (cf par exemple la communication de John Byrum sur les ISBD de Jérusalem 2000).

Le bulletin de la Section "SCATNews", édité 2 fois par an, est avant tout destiné aux membres, mais les personnes intéréssées peuvent aussi le consulter sur le web.

Nous continuons également la coopération avec le trimestriel "Cataloging and Classification Quarterly" (CCQ) entamée il y a environ quatre ans (en ce qui concerne les membres européens). Plusieurs membres de la Section font partie du Bureau éditorial.

Pages de la Section sur IFLANet

Depuis l'année dernière les rubriques se sont enrichies (www.ifla.org/VII/s13/). Vous y trouverez les dernières nouvelles et les textes des normes en cours d'enquête (rubrique "Announcements"). Dans le paragraphe "Family of ISBDs" qui renvoie vers les pages de l'UBCIM vous est proposée la bibliographie de ces règles en anglais (19 références des "manifestations") et en 12 langues [3] (plus de 140 réf. en tout). La liste des traductions en français des ISBD comporte 14 réf. dont sept sont d'actualité et disponibles en vente à la BNF. D'autres rubriques "Conferences and Seminars", "Minutes of meetings", "Annual Reports" peuvent compléter votre documentation.

Parmi les **projets courants** vous en remarquerez deux dont les enquêtes internationales se sont déroulées au printemps 2001 : ISBD(S) et ISBD(M). Il n'y a pas une grande révolution à attendre de l'ISBD (M) – un alignement sur les FRBR était cependant nécessaire. L'objectif de ce projet était d'assurer la conformité entre les règles de l'ISBD et les FRBR, concernant le niveau de base des notices bibliographiques nationales. Les onze changements majeurs ont été expliqués dans la lettre accompagnant l'enquête, disponible sur IFLAnet.

En revanche, la nouvelle révision de l'ISBD(S) apporte des nouveaux concepts dont nous avons déjà eu des éléments d'information l'année dernière. Nous appellerons "ressources en continu"(l'acronyme proposé est "CR") ce que nous avions l'habitude de nommer "publications en série ; un concept nouveau de l'ISST (titre international normalisé) est en train d'être discuté. La révision de l'ISBD(S) a dépassé le cadre strict de la Section de catalogage et a touché, depuis le début du processus, toutes les "communautés" mondiales concernées par les publications en série : AACR et l'ISSN. Nous sommes satisfaits que ce défi ait été relevé. Ingrid Parent, la présidente du groupe de révision de l'ISBD(S) vous parlera en détail de ce projet pendant la présente réunion (cf aussi "Invitation to review"sur IFLANet).

Parmi d'autres projets menés dans les dernières périodes il convient de noter :

Guidelines for OPAC Displays , les métadonnées, le Dictionnaire multilingue des termes catalographiques entrepris en 1999 ainsi que l'ancien projet à long terme "Classiques anonymes".

Si je ne m'étends pas sur les détails de tous les projets, c'est parce que vous aurez l'occasion d'obtenir des informations des personnes - ressources lors de la Session ouverte le mercredi 22 août, ou au cours de la présente session de la Division.

Monika Münnich (Allemagne) parlera du projet du dictionnaire multilingue, Françoise Bourdon (France) de l'état d'avancement du groupe FRANAR. Cette session couvrira également le sujet de "l'après FRBR"- Patrick Le Bœuf (France), et les fichiers d'autorités aux USA – Barbara Tillett. [4]

Dans le cadre de cette conférence IFLA la Section Catalogage organise l'atelier sur le thème de l'UNICODE, conjointement avec la Section de Technologie de l'Information (jeudi 23 août). Ce thème fait suite à l'état de nos interêts aux problèmes multilingues, multiscripts, les usages des catalogues dans l'environnement multilingue et les solutions apportées par les technologies et les standards nouveaux. Nous espérons que plusieurs d'entre vous s'intéressent à ces questions.

Si vous souhaitez obtenir de plus amples nouvelles sur d'autres projets de la Section, n'hésitez pas à contacter les présidents des groupes ou les officiers de la Section.

Propagation des projets accomplis et leur impact

Avant de conclure je voudrais m'arrêter sur un des projets les plus importants de la Section au cours de la dernière décennie dont l'impact peut être constaté à travers le monde entier, dans plusieurs domaines et à différent niveau. Il s'agit des FRBR (Functional requirements for bibliographic records). Les sujets des études ultérieures suggérés dans le rapport final (impact sur les bibliographies nationales, différents types de bibliothèques, règles de catalogage nationales et leur enseignement ; l'impact sur les ISBD et leur évolution ; l'impact sur le contrôle d'autorité) ont été largement couvert dans le monde entier.

En Janvier 2000 " there were more than 100 references to FRBR in documents available on the net " (J. Byrum). Un autre indicateur de niveau d'interêt pour les FRBR est le nombre de connections sur la version web du raport FRBR (5237 entre Janvier 2000 et Octobre 2000, rang 8th <1165 en Janvier – 2ème rang, 1746 en Mars– 3ème rang , 1578 en Septembre – 4ème rang et 1548 en Octobre - 4ème rang > [5]

The European Library Automation Group (ELAG) a participé activement à la propagation du modèle, le sujet des FRBR a été discuté dès la parution de l'étude (cf les ateliers de 1998, 1999, 2000 et 2001), plusieurs présentations ont pu être faites (L. Holm, 1999 ; P. Le Bœuf, 2001).

Cet impact est aussi très net au sein de groupes professionnels nationaux (par exemple en Italie, AIB – Assoziacione Italiana Biblioteche[6] ; dans les pays scandinaves ; en Australie,). La France a également entrepris la refléxion dans ce domaine au sein de l AFNOR – Association Française de Normalisation, de la BNF etc. dans les programmes de notre section lors des congrès annuels de l'IFLA nous avons régulièrement sollicité des interventions sur ce thème (P.Noerr, 1998 ; E.Murtomaa. 1998, K.Strunck, 1999). Cette année nous entendrons Patrick Le Bœuf, qui d'ailleurs dans les références de son article n'a pas cité sa propre communication prononcée le 6 juin dernier lors de la conférence annuelle d'ELAG 2001, par modestie ? [7] Les groupes de travail MLAR (Working Group on Minimal Level Authority Records and the ISADN), FRANAR (Functional Requirements for Authority Numbers and Records), la révision des ISBD, quant à eux, ont aussi pris en compte le concept et le modèle développé par FRBR.

En cette année 2001 je cesse de servir la Section. C'était un honneur et un plaisir de remplir la fonction de secrétaire pendant 4 ans. J'espère que je ne vous ai pas déçus, malgré quelques petites difficultés. J'ai fait de mon mieux. Cette période m'a permi de mieux connaître les coulisses de l'Association, de nouer des connaissances et des amitiés avec les collègues du monde entier. Permettez moi enfin, d'exprimer ma grattitude envers toutes les personnes qui m'ont accompagnée dans mes débuts et qui m'ont encouragée professionnellement dans ce parcours (y compris dans la longue période durant laquelle j'étais observatrice puis membre de la Section), en particulier : Nancy John, Olivia Madison, Susanne Jougelet, Ingrid Parent, Dorothy McGarry, John Byrum, Marie-France Plassard, et nos deux dernières présidentes Barbara Tillett et Ia McIlwaine. Je remercie tous les membres des Comités Permanents successifs de m'avoir fait confiance.

Maria Witt, Juin 01

References

[1] Structures of corporate name headings : final report, November 2000 / IFLA Section on Cataloguing, Working Group on the Revision of FSCH ; compiled and introduced by Ton Hejligers. – IFLA, UBCIM Programme 2001. - 21-21 p.

[2] Guidelines for authority records and references. 2nd ed. revised by the IFLA Working Group on GARE Revision. – München : K.G.Saur, 2000. - XII-46 p. – (UBCIM Publications). Formerly Guidelines for authority and reference entries…

[3] Langues représentées : catalan, croate, espagnol, finois, français, hongrois, italien, lituanien, neerlandais, slovaque, slovène, tchèque

[4] Les sessions de Jérusalem ont suscité un vif intérêt de la part de congressistes. Nous espérons vous intéresser également cette année et vous voir nombreux mercredi 22 août et jeudi 23 août

Autour du thème phare " Positionning Cataloguing for the Future " parleront :

- Monika Münnich (Germany) – Etat d'avancement du Dictionnaire multilingue des termes et concepts de catalogage (Progress on the Multilingual Dictionary of Cataloguing terms and Concepts) ;
- Françoise Bourdon (France) – Spécifications fonctionnelles et numérotation internationale des notices d'autorité (FRANAR) : jusqu'ou le contrôle d'autorité peut-il être secondé par la technique ? (New view of UBC and FRANAR proposals);
- Barbara Tillett (USA) Fichier d'autorité virtuel et international
- Patrick Le Bœuf (France) – L'impact du modèle FRBR sur les révisions à venir des ISBD : un défi pour la Section de catalogage de l'IFLA (The Impact of the FRBR Model on the Future Revisions of the ISBDs : a Challenge for the IFLA Section on Cataloguing)

[5] source : Selected IFLANET Statistics January 2000-October 2000. Joint EB/PB/Activities meeting, December 6, 2000)[

[6] FRBR Seminar : Functional Requirements for Bibliographic Records : [International Conference] Florence, 27-28 January 2000. Proceedings edited by Mauro Guerrini. - Rome, AIB 2000. - 156-160 p. - Ac tes en anglais et italien. (Au cours de cette conférence sont intervenus les membres de la Section : Olivia Madison et John Byrum <impliqués directement dans l'étude FRBR>, Isa de Pinedo).

[7] FRBR : toward some practical experience in ELAG ? / Patrick Le Bœuf. Communication présentée lors de la 25e conférence annuelle ELAG 2001, Prague, 6-8 juin 2001 <http ://www.stk.cz/elag2001/> ;

Cf aussi la bibliographie de sa présentation IFLA 2001, 15 réf.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number: 112-110-E
Division Number: IV
Professional Group: Division Bibliographic Control
Joint Meeting with: -
Meeting Number: 110
Simultaneous Interpretation: Yes

Section on Cataloguing
Report of the Activities 2000-2001

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Interest in cataloguing

The interest in cataloguing and for its harmonisation at the international level has been shared for a long time by the libraries throughout the entire world. The Section on Cataloguing is one of the oldest IFLA sections and attracts more and more members.
The goal and focus of work on standardization has been for a long time the Section's main activity, the objective of which is defined in the Medium Term Programme.

In this context the Section has looked at the development and maintenance of cataloguing standards and guidelines for traditional formats, but also has taken into account the revolutionary developments in the digital, electronic, and networked environment in order to promote universal access to and exchange of bibliographic information. The Section has also developed a new view of bibliographic description, based on functional requirements: the famous "FRBR" or Functional Requirements for Bibliographic Records. Concerning the usages of computerized catalogues, we took into account this topic by creating the Working Group on Guidelines for OPAC Displays. During the last ten years we took also into account the questions of authority information, harmonization of which is necessary for efficient use all over the world.

The Section worked simultaneously on numerous projects and are able to do this, because the Standing Committee members are numerous and many colleagues from other sections are also involved: we have the philosophy of cooperation in the broad sense of this term. In the projects initiated by the Section on Cataloguing we would like to attract other experts in order to cover a maximum of needs.

The Section has close relationships with the IFLA Section on Information Technology, Section on Serials, and of course we do not forget the Sections within our own Division IV : the Section on Bibliography and Section on Classification and Indexing, as well as the UBCIM programme office of IFLA. We deal also with other organizations and institutions including ISO, in particular the Committee TC46, international and national cataloguing and standardization committees, and professional training schools and courses.

Membership and Standing Committee

The Section increased its members by ten per cent : it had 149 members in December 1998 and 163 members in December 2000. For several years now the SC has functioned with IFLA's maximum number of 20 persons (21 between 1999 and 2001), plus corresponding members, the observers, and honorary members, (sometimes as active as the regular members). Several continents are presently represented within the Section and within the Standing Committee, but we would like to expand the participation of members from Asia and Africa. During the IFLA annual conferences, there are always many people in addition to Committee members at our SC meetings: it reflects the popularity of the topics and interest for the questions that are discussed.

Concerning officers : for many years the chair has been from North America (the most recent chairs were : Olivia Madison, USA; Ingrid Parent, Canada; Barbara Tillett, USA), but the Secretary and Information Officer were European (Secretary: Susanne Jouguelet, France; Maria Witt, France) (Information Officer: Kerstin Dahl, Sweden) .
Updated information will be given during the Open Forum of Division IV after the elections during the first meeting of the Standing Committee.

During the year, between annual IFLA conferences, different Working Groups (WG) continue their projects using different means and methods of work : e-mail, fax, snail mail, and also fruitful meetings "face to face". We will have the opportunity during this session, to hear several WG leaders on the projects conducted, so I will not describe them here.

For other details you can consult the written reports, minutes, and presentations given at previous annual conferences ; these documents are available on the IFLAnet in several languages.

The Section attaches a very great importance to the publicity and translation of finished and current projects, as well to the translation of conference presentations. For a long time now, many efforts were devoted to translations and were very fruitful. As a secretary dealing with the organization of this task I would like thank all colleagues and members of the Section who belong to the "official linguistics areas" for their active participation in translating papers of the Open sessions and Workshops. Concerning the French language, I extend great thanks to the other IFLA sections' members but also to other professionals outside IFLA for answering my calls for translation assistance. As a result of their good work, you were the first to know the new papers; it was an advantage! I cannot forget of course those authors, who prepared two linguistic versions by themselves, this fact greatly made easier my task of secretary!

Recent publications

Two "monographs" have been finished since last year.

Final report on the Form and Structure of Corporate Headings [1] published by IFLA and written by Ton Heijligers (Nederlands), is the result of the 6-year WG. After the identification of the most problematic rules of the FSCH guidelines and their comparaison with AACR, RAK, and AFNOR, the group abandonned the idea of updating the FSCH Guidelines and proposed a report on the possibilities of contributing guidance regarding the form and structure of corporate names. This guidance would be available to developers of a future virtual international authority file and people in charge of online catalogs. A virtual international authority file was suggested which could be used by any library. The WG worked in cooperation with the UBCIM programme and with the FRANAR Working Group.

GARR – **"Guidelines for Authority Records and References"** was published also at the beginning of 2001, led by de Isa de Pinedo (Italy). [2] The objective of this work was to publish a single comprehensive and flexible set of rules, giving examples (covering all materials, especially adding music, electronic resources, and legal works). Two specific issues were considered: legal materials (treaties, laws) and serials. The close and fruitful cooperation with other groups: MLAR and FRANAR, as well as with UBCIM should be noted

Publication of articles : Every year the Section on Cataloguing is well represented in articles in the quarterly published by **UBCIM "International Cataloguing and Bibliographic Control" (ICBC)**, including many of the Section's presentations from annual conferences and the papers reporting on progress of the Working Groups. We also have had those topics intended for the larger public presented in the "IFLA Journal" (cf. for example John Byrum's paper on the ISBD review process from the Jerusalem 2000 conference).

The Section's newsletter " **SCATNews** " is published twice a year, in print and electronic form (on the IFLANET web site).

We also continue the cooperation with the journal **"Cataloging and Classification Quarterly" (CCQ)** that was started approximately four years ago. Several of the Section's members belong to the CCQ Editorial Committee.

Pages of the Section on the IFLANet

Since last year the web pages of the Section have been enriched (www.ifla.org/VII/s13/). You will find there the latest news and the texts of standards and guidelines currently on review (see "Announcements"). In the paragraph "Family of ISBDs" which links directly to the UBCIM pages you are presented with the bibliography of ISBDs. There are 19 manifestations in English and citations listed for manifestations in 12 other languages [3] (over 140 references in all). The list of French translations of the ISBDs' contains 14 citations; among them seven are currently in use and can be purchased from the BNF. Other web Cataloguing chapters like "Conferences and Seminars", "Minutes of meetings", "Annual Reports" may complete your documentation.

Among **current projects** you may wish to pay particular attention to two of them which were on world wide reviews last Spring : ISBD(S) and ISBD(M). There is no big revolution from the ISBD (M) side. The objective of this project was to ensure the conformity between the rules of ISBDs and FRBR, in particular for the basic level of national bibliographic records. The eleven major changes in the revision were explained in John Byrum's letter accompanying the review, available on the IFLANet.

In contrast, the new ISBD(S) revision brings new totally concepts that we heard about last year. We will call the new ISBD "continuing resource" (with the suggested acronym, "CR"). These are the things that we used to call "serials" plus "integrating resources." There is also a new concept ISST (International Standard Serial Title – ISST) under discussion. The ISBD(S) revision went beyond the strict limits of IFLA and the Section on Cataloguing and had touched, since the very beginning of the process, other international "communities" concerned with serials : namely AACR and ISSN. We are very satisfied that the goal was achieved. Ingrid Parent, the chair of the Working Group on the ISBD(S) revisions, will talk to you with details on this project during this session (see also "Invitation to review" on the IFLANet).

Among other projects conducted during last year we can mention :
Guidelines for OPAC Displays, the Metadata Schemes, a Multilingual Dictionary for Cataloguing Terms started in 1999, and the long-running project "Anonymous classics".
If I don't speak in detail on all these projects, that's because you will have the occasion to get the information directly from some of the Working Group leaders during this session of the Division (Ingrid Parent – Canada) and during the Open Session of the Section on Wednesday 22 August morning. Monika Münnich (Germany) will speak on the multilingual dictionary project, Françoise Bourdon (France) – will give updated information on FRANAR. The Open session will cover also the subject "After FRBR"- Patrick Le Bœuf (France), and the idea of a virtual international authority file– Barbara Tillett (USA). [4]

During this annual IFLA conference the Section on Cataloguing had planned a workshop on UNICODE, in conjunction with the Section on Information Technology. This topic followed some previous investigations and expressions of interests concerning multilingual issues in bibliographic control, including problems of multiple scripts, the use of catalogues in multilingual environments, and solutions proposed by the technologies and new standards. Unfortunately we were obliged to cancel this session. *(Note : this updated information is not included in original French version of my report, put on the net before the English one.)*

If you desire to get more complete news on other Section's projects, do not hesitate to contact WG's leaders or the Section's officers.

Projects accomplished – impact continues
Before concluding I would like to stop for awhile on one of the most important projects of the Section in the past 10 years, which had a great impact on other works. Its name is The Study on Functional Requirements for Bibliographic Records (FRBR). The final report published in January 1998 defined some follow-up steps, consisting of examining the impact on:

- National bibliographic agencies, individual libraries, cataloguing codes and guidelines, and teaching of cataloging;
- ISBD's and their evolution; and
- Authority control.

These suggestions were broadly covered throughout the entire world. In January 2000 " there were more than 100 references to FRBR in documents available on the net " (J. Byrum). Another indicator of the level of interest in FRBR is the number of connections to the Web version of FRBR report (5237 between January 2000-October 2000, rank 8th <1165 in January - rank 2nd, 1746 in March - rank 3rd, 1578 in September - rank - 4th and 1548 in October - rank 4th >)
The European Library Automation Group (ELAG) was very active in this area. The FRBR subject has been discussed by ELAG since the study's publication at ELAG workshops in 1998, 1999, 2000 and 2001, and several presentations were done (L. Holm, 1999 ; P. Le Bœuf, 2001). During the 2000 Workshop some common features were discussed between archives, libraries, and museums.

The FRBR impact is also very important within several national professional forums for example within AIB – (Assoziacione Italiana Biblioteche), within the Scandinavian countries, in Australia, etc. France has also undertaken the discussion on this topic within AFNOR – Association Française de Normalisation, in BNF etc. During the Section's Open sessions at IFLA annual conferences, we regularly provided FRBR presentations (P.Noerr, 1998 ; E.Murtomaa. 1998, K.Strunck, 1999). This year we will hear Patrick Le Bœuf, who didn't cite his own paper given the last June 6th during the annual conference ELAG 2001, perhaps because of modesty ? [7] Also the projects of the Section and the Division IV like the Working Group on Minimal Level Authority Records and the ISADN (MLAR), the FRANAR Working Group (Functional Requirements for Authority Numbers and Records, and the Working Groups on the ISBD revisions, had all taken into consideration the FRBR concept and model.

This year 2001 I end my service to the Section. It was an honour and a pleasure to serve as secretary for 4 years. I hope that I did not disappoint you despite some small difficulties. I did my best and what I could. This period permitted me to get to know better the ins and outs of IFLA, to make new acquaintances and friendships with colleagues from all over the world. Would you allow me, finally, to thank all the people who assisted me since my beginnings and who encouraged me professionally during this period of 12 years (including the first one when I was an observer and then member of the Section), in particular: Nancy John, Olivia Madison, Susanne Jouguelet, Ingrid Parent, Dorothy McGarry, John Byrum, Marie-France Plassard, and two lasts chairs of the Section and the Division, Barbara Tillett et Ia McIlwaine. I thank all the members of the Standing Committee for your confidence in me.

Maria Witt, Juin 01

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[1] Structures of corporate name headings : final report, November 2000 / IFLA Section on Cataloguing, Working Group on the Revision of FSCH ; compiled and introduced by Ton Hejligers. – IFLA, UBCIM Programme 2001. - 21 p.

[2] Guidelines for authority records and references. 2nd ed. revised by the IFLA Working Group on GARE Revision. – München : K.G.Saur, 2001. - XII-46 p. – (UBCIM Publications). Formerly Guidelines for authority and reference entries…

[3] Languages represented : Catalan, Czech Croate, Dutch,, Finnish, French, Hungarian, Italian, Letton, Slovak, Slovenian, Spanish

[4] The Jerusalem conference interested many participants and the attendance was good. We hope that this year the program will also be interesting.
Thème "Positionning Cataloguing for the Future", Catalogiung Open Forum, Wednesday August 22nd, 8.30 to 11, meeting number 152a:

- Monika Münnich (Germany) –Progress on the Multilingual Dictionary of Cataloguing Terms and Concepts ;
- Françoise Bourdon (France) – Spécifications fonctionnelles et numérotation internationale des notices d'autorité (FRANAR) : jusqu'ou le contrôle d'autorité peut-il être secondé par la technique ? = New view of UBC and FRANAR proposals ;
- Barbara Tillett (USA) A Virtual International Authority File ;
- Patrick Le Bœuf (France) – L'impact du modèle FRBR sur les révisions à venir des ISBD : un défi pour la Section de catalogage de l'IFLA = The Impact of the FRBR Model on the Future Revisions of the ISBDs : a Challenge for the IFLA Section on Cataloguing

[5] source : Selected IFLANET Statistics January 2000-October 2000. Joint EB/PB/Activities meeting, December 6, 2000)

[6] FRBR Seminar : Functional Requirements for Bibliographic Records : [International Conference] Florence, 27-28 January 2000. Proceedings edited by Mauro Guerrini. - Rome, AIB 2000. - 156-160 p. – Proceedings in English and Italian. (During this conference the members of the Section gave presented papers : Olivia Madison <chair of the Study Group> and John Byrum <member of the FRBR Study Group>, and Isa de Pinedo).

[7] FRBR : toward some practical experience in ELAG ? / Patrick Le Bœuf. Paper presented at the 25th ELAG Annual Conference , Prague, 6-8 juin 2001 <http ://www.stk.cz/elag2001/> ; See also the bibliography of Le Bœuf's IFLA 2001 presentation, 15 ref.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number: 135-110-E
Division Number: IV
Professional Group: Division Bibliographic Control
Joint Meeting with: -
Meeting Number: 110
Simultaneous Interpretation: Yes

Section on Bibliography
Review of activities 2000-2001

John D. Byrum, Jr.
Secretary of the Section on Bibliography,
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Scope of the Section on Bibliography

The Section on Bibliography is primarily concerned with the content, arrangement, production, dissemination and preservation of bibliographic information, especially (but not exclusively) where these pertain to national bibliographic services. It is also concerned with the promotion of the importance of the discipline of bibliography to library professionals in all types of library (not just national libraries), to publishers, distributors and retailers and also to end-users. While taking full account of technological possibilities, the Section is aware that such developments are not yet fully available in some areas of the world, and it will ensure that its solutions are not necessarily dependent on particular technologies. The Section is closely associated, where appropriate, not only with the other Sections within the Division of Bibliographic Control and with the UBCIM Programme, but also with the Sections on Information Technology and of National Libraries.

Standing Committee Membership and Officers

109 associations, institutions, and personal affiliates are currently members of the Section.

The members of the new Standing Committee for the period 2001-2005 are: 20 full members, 4 corresponding members, and 1 honorary advisor.

Full members of the Standing Committee are from 17 different countries: Croatia, Czech Republic, Denmark, Finland, France, Germany, Iran, Italy, Norway, Portugal, Russia, South Africa, Spain, Sri Lanka, Sweden, United Kingdom, United States of America.

Werner Stephan (Universitätsbibliothek Stuttgart) and John Byrum (Library of Congress) will complete their terms of office as chair/treasurer and secretary, respectively, at Boston and elections will be held for both offices. Kirsten Waneck (Dansk BiblioteksCenter) is serving as Information Coordinator.

Action Plan 2000-2001

At its two meetings held during the 2000 IFLA Conference in Jerusalem, the Section's Standing Committee devoted considerable attention to its Medium Term Program for 1998-2001 and the action items formulated to achieve the goals for the period. Specific topics of interest from the action plan are normally handled by working groups. At the moment, the members of the Standing Committee are involved in various projects of the section itself and in projects in cooperation with other sections of the Division of Bibliographic Control and with the Sections on Information and Technology and on National Libraries.

The Section on Bibliography's Standing Committee has dealt attentively with the recommendations and results of the International Conference on National Bibliographic Services (ICNBS) held in 1998. The work showed main points of concern which should be pursued and promoted. Unfortunately, the status of the proceedings of this conference is still not clear, although most recently publication had been projected for autumn 2000. However, the document regarding *Guidelines for Legal Deposit* is now available electronically on IFLANET at http://www.ifla.org/VII/s1/gnl/legaldep1.htm . This document is a much needed revision of earlier Guidelines undertaken to consider changes resulting from a larger number range of jurisdictions and the advent of electronic publishing and publications.

The Standing Committee last year established a small working group to: (1) identify national bibliographic agencies which essentially comply with the recommendations of the ICNBS, mentioned above; and (2) to discover bibliographies which could be more effective if produced in greater compliance with the recommendations. An additional justification for this project is to determine and suggest ways by which national bibliographic agencies can use their limited resources more efficiently through voluntary cooperation. A final report has been submitted, and it will be the subject of meetings during the Boston Conference.

The Section appointed another working group to develop and test a strategy for enlisting publisher cooperation in providing metadata for electronic resources they produce to assist national bibliographic agencies in preparing entries for these resources. This group will also investigate how best to utilize metadata from publishers to promote bibliographic control. The Section will work with the Section on Classification and Indexing to undertake a survey of "subject gateways" as an emerging form of webliography of increasing utility to librarians and library users. Yet another working group has been formed to propose guidelines to serve as selection criteria to assist national bibliographic agencies in deciding which electronic resources to represent in their bibliographies. In addition, the Standing Committee is revisiting and updating two earlier surveys in this field which it had commissioned, one by Ross Bourne on "National Bibliographic Agencies and the Book Trade" and the other by Robert Holley entitled "Results of a Survey on Bibliographic Control and National Bibliography".

Conference Programmes and Workshops

Jerusalem, 2000:

The Section sponsored an Open Forum that was well attended, at which three papers were presented. Bohdana Stoklasova of the National Library of the Czech Republic presented a paper she prepared with a contribution by Marie Balikova, also of the National Library, on "The national bibliography of a small country in international context" (available at http://www.ifla.org/IV/ifla66/papers/093-123e.htm)

Rochelle Kedar, Bar Ilan University, Gamat Gan, Israel presented a paper on "Bibliographic projects and tools in Israel" (available at: http://www.ifla.org/IV/ifla66/papers/090-123e.htm). The final paper was prepared by Maria Patrizia Calabresi, Biblioteca Nazionale Centrale (Rome) entitled "Two national central libraries in Italy: bibliographic co-operation or competition?"
(available at: http://www.ifla.org/IV/ifla66/papers/066-123e.htm)
Three speakers were invited to share their experience with about 30 participants from 13 different countries who attended the Workshop.

The first speaker was Retha Snyman, a senior lecturer in the Department of Information Science, University of Pretoria, South Africa. Her talk covered "Bibliographic control - is the current training still relevant?" is available at http://www.ifla.org/IV/ifla66/papers/108-183e.htm . The second speaker was Mona Madsen, Head of the Department of Information Studies in the Royal School of Library and Information Science, Copenhagen. Her presentation focused on "Teaching bibliography, bibliographical control, and bibliographical competence" and is available at http://www.ifla.org/IV/ifla66/papers/144-183e.htm
There followed an extensive and lively discussion on the Workshop topics.

BOSTON 2001:

The Section is planning an Open Forum on August 21, 12:30-15:00, on the topic "Bibliography: indispensable or redundant" and to include the following presentations:

- "Bibliographic control or chaos: an agenda for national bibliographic services in the 21st century" by Michael Gorman (Dean, Library Services, California State University, Fresno, USA)
- "Selektion von Online-Publikationen für Nationalbibliographien" by Claudia Werner (Head, Central Bibliographic Services, Die Deutsche Bibliothek, Frankfurt am Main, Germany)
- "The New Books Project: a prototype for re-inventing the Cataloguing-in-Publication program to meet the needs for publishers, libraries and readers in the 21st century" by John Celli (Head, CIP Division, Library of Congress, Washington, USA)
- "The Canadian National Bibliography: 50 years of continuity and change" by David Balatti (Director, Bibliographic Services, National Library of Canada, Ottawa, Canada).

In addition, the Section will co-sponsor, with the Section on National Libraries, a half-day Workshop August 23 13:30-17:30 on "What makes a good national bibliography even better? Current Situation and Future Prospects". It will cover the findings of a recent study of the status and trends concerning production of national bibliographies throughout the world – with particular attention to their conformance with and implementation of recommendations produced by the International Conference on National Bibliographic Services (Copenhagen, 1998). In addition, representatives of three national bibliographies selected for some exceptional accomplishments – Swaziland, South Africa, and Sweden – will report on their accomplishments and the measures taken to realize them. There will be information shared regarding the International Conference on National Bibliography in a Changing Information Environment, held October 2000 in Tallinn, Estonia. In addition, a 1996 survey regarding impacts of new technology on production and distribution of national bibliographies will be updated. Finally, there will be a thought-provoking presentation on uses and usefulness of national bibliographies.

The conveners are John D. Byrum, Jr. Secretary IFLA Section on Bibliography, Library of Congress USA and Fernanda Guesdes de Campos, IFLA Section on National Libraries, National Library of Portugal. The program consists of presentations by Anne Langballe, National Library of Norway, Oslo Division;

Barbara Bell, College of Wooster, USA; Tienie de Klerk, National Library of South Africa, Pretoria, RSA; Paiki Muswazi, University of Swaziland Library; Eva Tedenmyr, National Library of Sweden, Stockholm; Janne Andresoo, National Library of Estonia, Tallin; Unni Knutsen, National Library of Norway, Oslo Division; and, Marcelle Beaudiquez, Bibliothèque nationale de France. Time has been allocated for discussion by Workshop participants.

July 9, 2001

67th IFLA Council and General Conference
August 16-25, 2001

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Simultaneous Interpretation:	**Yes**

Section de bibliographie
Rapport d'activité 2000 – 2001

John D. Byrum, Jr.
Secrétaire de la Section de bibliographie,
Library of Congress, Washington D.C., Etats-Unis

Domaine de la Section de bibliographie

La section de bibliographie est principalement concernée par le contenu, le classement, la production, la diffusion et la conservation de l'information bibliographique, particulièrement (mais pas seulement) quand celle-ci relève des services bibliographiques nationaux. Elles est également concernée par la promotion de la bibliographie en tant que discipline fondamentale pour les professionnels des bibliothèques dans tous les types de bibliothèques (pas seulement les bibliothèques nationales), pour les éditeurs, les distributeurs, les détaillants ainsi que les utilisateurs. Tout en tenant pleinement compte des possibilités techniques, la Section est consciente que de telles ressources ne sont pas encore pleinement disponibles dans certaines régions du monde, et elle veille à ce que les solutions qu'elle propose ne soient pas nécessairement dépendantes de techniques particulières. La Section collabore étroitement, chaque fois que nécessaire, non seulement avec les autres sections de la Division du Contrôle bibliographique et avec le Programme UBCIM, mais également avec les sections Technologie de l'information et Bibliothèques nationales.

Responsables et membres du Bureau Permanent

109 associations, institutions et membres individuels sont actuellement membres de la Section.

Le nouveau Bureau Permanent pour la période 2001-2005 est constitué de 20 membres, 4 membres correspondants et 1 membre honoraire.

Les membres du Bureau Permanent viennent de 17 pays : Afrique du Sud, Allemagne, Croatie, Danemark, Espagne, Etats-Unis, Finlande, France, Iran, Italie, Norvège, Portugal, République Tchèque, Russie, Royaume Uni, Sri Lanka, Suède.

Werner Stephan (Universitätsbibliothek Stuttgart) et John Byrum (Library of Congress) terminent leurs mandats à Boston, respectivement comme président / trésorier et comme secrétaire, et des élections auront lieu pour les 2 postes. Kirsten Waneck (Dansk BiblioteksCenter) est Responsable de la communication.

Plan d'action 2000 – 2001

Lors des deux réunions tenues au cours du Congrès IFLA 2000 à Jérusalem, le Bureau Permanent de la Section a porté une grande attention à son Programme à moyen terme 1998-2001 et les activités ont été programmées pour atteindre les buts fixés pour la période. Certains domaines d'intérêt particuliers du plan d'action sont naturellement entre les mains de groupe de travail. Actuellement, les membres du Bureau Permanent sont impliqués dans divers projets propres à la section et dans des projets en coopération avec d'autres sections de la division du Contrôle bibliographique et avec les sections Technologie de l'information et Bibliothèques nationales.

Le Bureau Permanent de la section de bibliographie suit attentivement les recommandations et les résultats de la Conférence Internationale sur les Services bibliographiques nationaux (ICNBS) tenue en 1998. Les conclusions avaient défini différents thèmes qui devraient être poursuivis et développés. Malheureusement, le sort des actes de cette conférence n'est pas très clair, leur publication prévue à l'automne 2000 n'a toujours pas été faite. Cependant, le document *Guidelines for Legal Deposit* est désormais disponible en version électronique sur IFLANET (http://www.ifla.org/VII/sl/gnl/legaldepl.htm). Ce document est une version très proche du premier *Guidelines* préparé pour prendre en compte les changements résultant d'un grand nombre de modifications réglementaires et de l'arrivée des publications électroniques.

Le Bureau Permanent a établi l'année dernière un petit groupe de travail : 1) pour identifier les agences bibliographiques nationales qui se conforment aux recommandations de l'ICNBS, voir ci-dessus ; et 2) pour découvrir les bibliographies qui pourraient être plus efficaces si elle étaient produites en plus grande conformité avec les recommandations. Un objectif supplémentaire pour ce projet est de définir et de proposer les moyens par lesquels les agences bibliographiques nationales peuvent utiliser leurs ressources limitées de manière plus efficace grâce à des coopérations volontaires. Un rapport final a été remis et il sera le support des réunions de la Conférence de Boston.

La section a constitué un autre groupe de travail pour développer et tester une stratégie destinée à renforcer la bonne volonté des éditeurs dans la fourniture des métadonnées de leurs publications électroniques afin d'aider les agences bibliographiques nationales à préparer les accès à ces ressources. Ce groupe doit également rechercher comment mieux utiliser les métadonnées des éditeurs pour promouvoir le contrôle bibliographique. La section travaillera avec la section Classification et indexation pour entreprendre un recensement des « portails-sujets » considérés comme une nouvelle « webliographie » de plus en plus nécessaire aux bibliothécaires et aux utilisateurs. Par ailleurs, un autre groupe a été formé pour proposer des recommandations sur les critères de sélection qui devraient aider les agences bibliographiques nationales à choisir les ressources électroniques à recenser dans leurs bibliographies. De plus, le Bureau Permanent révise et met à jour deux études plus anciennes, l'une de Ross Bourne sur « Les agences bibliographiques nationales et le commerce du livre » et l'autre de Robert Holley intitulé « Résultats de l'étude sur le contrôle bibliographique et la bibliographie nationale ».

Programme des Conférences et Ateliers

Jérusalem 2000

La section a tenu sa Réunion plénière devant une assistance nombreuse. Trois communications ont été présentées :

- Bohdana Stoklasova (Bibliothèque nationale de République Tchèque), en collaboration avec sa collègue Marie Balikova, a présenté une communication intitulée « La bibliographie nationale d'un petit pays dans un contexte international » (http://www.ifla.org/IV/ifla66/papers/093-123f.htm).

- Rochelle Kedar (Bar Ilan University, Gamat Gan, Israël) a présenté une communication intitulée « Projects et outils bibliographiques en Israël » (http://www.ifla.org/IV/ifla66/papers/090-123f.htm).

- La dernière communication était préparée par Maria Patrizia Calabresi (Biblioteca Nazionale Centrale, Rome) intitulée « Deux bibliothèques nationales centrales en Italie : coopération ou compétition bibliographique» (http://www.ifla.org/IV/ifla66/papers/066-123f.htm).

Trois orateurs étaient invités à faire partager leur expérience aux 30 participants venus de 13 pays différents pour participer à l'Atelier.

Le premier orateur, Retha Snyman, « senior lecturer » du département Sciences de l'information de l'Université de Pretoria, a présenté le texte « Contrôle bibliographique : la formation est-elle encore pertinente ?» (http://www.ifla.org/IV/ifla66/papers/108-183f.htm). Le second orateur était Mona Madsen, chef du Department of Information Studies à la Royal School of Library and Information Science, à Copenhague. Sa présentation portait sur « Teaching bibliography, bibliographical control, and bibliographical competence » (http://www.ifla.org/IV/ifla66/papers/144-183e.htm). [Le troisième intervenant était John McIlwaine "Bibliographical Control : self-instruction from individualized investigations" (http://ifla.inist.fr/IV/ifla66/papers/133-183e.htm)]. Les présentations ont été suivies d'une discussion très ouverte et animée sur les thèmes de l'Atelier.

Boston 2001

La Section a prévu une réunion plénière le 21 août [2001] de 12^{h}30 à 15^{h} sur le thème « Bibliography : indispensable or redundant » avec les communications suivantes :

- « Bibliographic control or chaos » : la programmation des services bibliographiques nationaux du 21ème siècle par Michael Gorman (« Dean », Services des bibliothèques, California State University, Fresno, USA),

- « La sélection des publications en ligne dans les bibliographies nationales » par Claudia Werner (Chef des Services bibliographiques centraux, Die Deutsche Bibliothek, Frankfurt am Main, Allemagne), en allemand,

- « The New Books Project » : un prototype pour réinventer le programme du Catalogage avant Publication et satisfaire aux besoins des éditeurs, bibliothécaires et lecteurs du 21ème siècle, par John Celli (Chef de la Division CIP, Library of Congress, Etats-Unis),

- "La bibliographie nationale canadienne : 50 ans de continuité et de changement" par David Balatti (Directeur ; Services bibliographiques, Bibliothèque nationale du Canada, Ottawa, Canada).

De plus, la Section tiendra, conjointement avec la section des Bibliothèques nationales, un Atelier d'une demi-journée le 23 août de 13^{h}30 à 17^{h}30 sur le thème « What makes a good national bibliography even better ? Current Situation and Future Prospects ». On y parlera des résultats d'une récente étude sur l'état et les orientations de la production des bibliographies nationales à travers le monde, tout en portant une attention particulière à leur conformité aux recommandations de la Conférence Internationale sur les Services Bibliographiques Nationaux (ICNBS, Copenhague, 1998). De plus, 3 collègues de 3 pays différents dont les bibliographies nationales ont bénéficié d'améliorations significatives – Afrique du Sud, Suède, Swaziland – présenteront ces évolutions et les mesures prises pour les réaliser.

On parlera également de la Conference on National Bibliography in a Changing Information Environment, tenue en octobre 2000 à Tallinn en Estonie. De plus, une étude réalisée en 1996 sur les impacts des nouvelles technologies sur la production et la diffusion des bibliographies nationales sera mise à jour. Enfin, il y aura une communication « stimulante » sur les usages et l'utilité des bibliographies nationales.

Les organisateurs de cet Atelier sont John D. Byrum, Jr. (Library of Congress), secrétaire de la Section de bibliographie, et Fernanda Guesdes de Campos (Bibliothèque nationale du Portugal), membre de la Section des bibliothèques nationales. Les orateurs seront les suivants : Anne Langballe (Bibliothèque nationale de Norvège, Oslo), Barbara Bell (College of Wooster, Etats-Unis), Tienie de Klerk (Bibliothèque nationale d'Afrique du Sud, Pretoria), Paiki Muswazi (University of Swaziland Library), Eva Tedenmyr (Bibliothèque nationale de Suède, Stockholm), Janne Andresoo (Bibliothèque nationale d'Estonie, Tallinn), Unni Knutsen (Bibliothèque nationale de Norvège, Oslo) et Marcelle Beaudiquez (Bibliothèque nationale de France). Un débat entre les participants est prévu à l'issue de l'Atelier.

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Journals and the Shaping of Disciplinary Knowledge

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There appears to be a quite long-standing assumption that journals in scholarly fields are responsible for two functions: 1) they make public the work being done at a particular time in the field (thus reflecting the knowledge base of the field, and 2) they select what is to be communicated in the field (thus shaping the knowledge base of the field). While it very difficult to determine which of the functions actually describes journals' roles (primarily because of some privacy issues), it seems clear that journals do play an important part in the communication of knowledge in scholarly disciplines. This paper will address a couple of key issues related to the disciplinary role of journals in library and information science (LIS). The first issue is the nature of knowledge as communicated through public mechanisms such as journals. The second issue is the set of attributes that characterizes a portion of the content of LIS journals. In order to complete this examination a group of LIS journals with an explicit international focus will be examined.

Journals and Knowledge

One caveat must be offered at the outset of this investigation. Knowledge, of course, is a complex phenomenon, one which philosophers, sociologists, and others have argued over for years. It is not my intention to resolve disputes regarding what constitutes knowledge in any strict philosophical sense. That said, it is indeed necessary to delve to some degree into how knowledge claims are expressed. To begin with, one complexity of knowledge claims is that they represent a combination (sometimes uneasy) of rhetoric and epistemology. It is recognized by many philosophers that knowledge is grounded in language; so, too, is rhetoric. For a knowledge claim to be accepted by others, it is usually necessary that the expression of the claim be, not merely, acceptable to readers and hearers, but persuasive. Knowledge claims that are part of the content of journals persuade through logical argument, testimony, empirical evidence, and other means. The combination of rhetoric and epistemology suggests that there is a social element that is part of the expression of knowledge via outlets such as journals.

It is here that a substantial challenge arises. One the one hand, if the social aspect of knowledge is emphasized (or overemphasized), then one might conclude, as Shapin and Schaffer do, that "it is ourselves and not reality that is responsible for what we know. Knowledge as much as the state is the product of human action" (Shapin and Schaffer, 1985, p. 344). This stance denies that there is any foundation to knowledge apart from the perceptions of humans. The paths that knowledge have taken over time suggest that there is a more fundamental phenomenon that guides exploration, evidence, and expression. Time does not allow a complete excursus into epistemological grounding; suffice it to say that I find Haack's conclusion more palatable. She writes, "Standards of evidence are not hopelessly culture-bound, though judgements of justification are always perspectival. And we can have, not proof for thinking that our criteria of justification are truth-guaranteeing, but reasons for thinking that, if any truth-indication is available to us, they are truth-indicative" (Haack, 1995, p. 222). This position does not deny social aspects of knowledge growth and, perhaps especially, knowledge expression; rather, it seeks to unite social processes of knowledge building with the world we investigate through the perspectives of our disciplines.

The knowledge claims that form an important part of journals' content tend to reflect the dual social/realist nature of knowledge. Kornblith helps us understand this nature: "Knowledge is a natural phenomenon. It involves an interaction between human beings and the world around us. . . . Were the world wholly unstructured, it could not be known by creatures of any sort. . . . By the same token, human psychology must be richly structured as well, and structured in a way which dovetails with the structure of the world" (Kornblith, 1994, pp. 94-96). An essential element of the stance that I am articulating now is the denial of pure constructivism—the claim that all knowledge is nothing more than an individual construction based on individual perception. Simultaneously, I am not adopting a pure realism—the claim that the world is completely objective and our apperceptions of it, including our language and theories, are entirely referential. The middle ground, as I have already mentioned, is complex. It entails Kitcher's admonition that "the main social epistemological project consists in the investigation of the reliability of various types of social processes. Once we have recognized that individuals form beliefs by relying on information supplied by others, there are serious issues about the conditions that should be met if the community is to form a consensus on a particular issue—questions about the division of opinion and of cognitive effort within the community, and issues about the proper attribution of authority" (Kitcher, 1994, p. 114).

Kitcher's statement strikes at the heart of this study. Expressions of knowledge in LIS journals would have little efficacy if there were no indicators of reliability. Reliability, in the context of an examination of LIS journals, can be seen as represented in (at least) two aspects of journal content. One aspect is based in the source of the claim, the "speaker." The authors of journal articles situate their claims within putatively reliable bodies of evidence. The evidence is shaped through perspectival processes that are themselves shaped by some social forces. When the knowledge claims of authors are about social matters (including matters of information organization, information seeking behavior, etc.), the social forces may exert a substantial influence, and may be the objects of investigation. Matters of, for instance, gender and national origin influence the standpoint of the author. As Sandra Harding argues, however, the existence and acknowledgment of standpoint epistemology do not reduce the assessment of knowledge claims to relativism, but they do necessitate a recognition of the social structures of research and scholarship that may either embrace multiple perspectives on which knowledge claims may be based, or repress certain perspectives in favor of other ones (Harding, 1998).

Another aspect of journal content is attribution. In practical terms attribution is customarily realized through citation. If we limit our scope at this point to assume that authors of journal articles seek the most epistemically sound claims, and if they evaluate those claims according to some measure of reliability, then they will cite previous works that are relevant to their own work and that inform their own knowledge claims. Goldman formulates this assumption in the context of communicating testimony: "First, the communicator must select which of the observed facts to communicate. If she has observed ten truths [accepting that the counting of truths is problematic] but it is not feasible to communicate each of them, she must decide which subset to report. Second, for each of the observed truths, there is the option of reporting it sincerely versus the option of distorting or falsifying it" (Goldman, 1999, p. 104). In light of what Goldman says, we can see citations as testimonial acknowledgement of prior work for reasons that may themselves be complex. Garfield reminds us of at least some of the many reasons writers may have for citing previous work (Garfield, 1965, p. 189); for the purposes of this examination, the possible reasons will be reduced to a couple. One of the reasons, as we will see, is related to Fuller's charge to epistemologists that they be concerned with locating attributions of cognitive authority (Fuller, 1988).

Purpose and Method of the Study

The central purpose of the present study is twofold: 1) describing some characteristics of the authors of journal articles in LIS, and 2) studying citations within journal articles to determine apparent epistemic links between the articles' content and the cited works. The first phase focuses on the gender and the nationality of authors. The second phase entails making an interpretive judgment as to the knowledge-based purpose for an author citing a particular work, based on evidence within the context of the citing article. The citation is categorized as either "epistemic" (indicating that the citing author incorporates something substantive from the cited work) or "procedural" (indicating that there is insufficient textual evidence to discern an epistemic link). Categorization of a citation as "procedural" should not be taken to mean that there is necessarily no epistemic link; it is intended only to signal that there is no clear textual suggestion of such a link. Another aspect of the second phase of analysis is the examination of the subject areas of cited works to determine if authors are building upon work within LIS and/or drawing upon work in other disciplines. The articles examined are taken from the 1999 volume years of five journals that purport to be international in scope: *Library Quarterly*, *Journal of the American Society for Information Science*, *Information Processing & Management*, *Library and Information Science Research*, and *Journal of Documentation* (the 1998 volume year of this journal is examined due to the unavailability of the 1999 volume year).

Time and space do not allow for an extended discussion of citation analysis here. I have addressed the topic elsewhere and will defer to the rationale for the use of the method provided there. At this time I will simply offer one observation from that earlier work: "If the citing author is asserting a knowledge claim in citing specific texts, then there is something that inheres in those cited texts that influences the citing author" (Budd, 1999, p. 269). Fuller also addresses the phenomenon of attribution in epistemic terms. "A producer 'has knowledge' if enough of his fellow producers either devote their recourses to following up his research (even for purposes of refutation) or cite his research as background material for their own. The producer continues to 'have knowledge' only as long as these investments by his fellows pay off for them" (Fuller, 1988, p. 30).

Findings

A total of 75 articles from the five journals were analyzed. (I should emphasize at the outset of this discussion of the findings that what is reported here is a set of indicators based on a descriptive examination of characteristics of authorship and citation. Ultimately I will speculate on the indicators and what they suggest for LIS and for other opportunities for inquiry.) In the 75 articles, 101 authors' genders can be identified (occasional use of initials prevents identification for all authors). Fifty-six of the authors (54.46%) are male; 45 (45.54%) are female. These indicators are a bit complicated by the tendency for professionals in librarianship to be women and for professionals in information science to be men. Since this sample is limited, no conclusions can be reached on a global scale about the gender of authors, although the distribution does not, in itself, indicate patterns of exclusion.

The nation of residence for the authors can also be examined; the residences of 120 authors are available. Since there are numerous nations represented, there is a further bit of reduction here. Authors' residences are divided into US and non-US; again, the sample size will not be sufficient for global conclusions. Sixty-four (53.33%) of the authors reside in the United States. Fifty-six (46.67%) reside in other countries. As is the case with gender, there are some complications with nation of residence. That said, the distribution does indicate that the journals are open to contributions from locations other than the US.

The next phase of investigation focuses on citations. As I mentioned earlier, the decision regarding categorization of citations is an interpretive one. A few examples might help illustrate how the decisions were made. In order for a citation to be categorized as "epistemic," there must be some textual evidence to support a conclusion that an author is incorporating some aspect of the cited work's content into the author's own knowledge claim. The evidence can be seen as either positive or negative. If an author offers a negative citation of a previous work, that can still be taken as affirming the author's claim. More frequently, though, the author is likely to refer positively to previous work. The absence of textual evidence supporting incorporation of previous work into a knowledge claim results in categorization of a citation as "procedural." In the purely epistemological sense, the author may have gained knowledge from that piece of previous work, but the outcome is not evident in the context of the article.

A passage from an article by Hirsch demonstrates textual evidence for support of a knowledge claim. She writes, "This high degree of overlap lends support to the suggestion by Barry and Schamber (1998) that a finite set of relevance criteria exists, despite differences in research methodologies applied, user groups studied, and information environments explored" (Hirsch, 1999, p. 1281). The quotation indicates that Hirsch is corroborating her findings with those of a prior study, thus lending credence to her own work. A passage from another article demonstrates an even more explicitly evaluative usage through citation. Chu writes, "In Freire's view, an illiterate is an individual oppressed within a dominant system rather than a person living on the fringe of a society, a marginal man. This view of 'marginality' was advanced by Silva Simsova, who viewed immigrants as caught between two or more social worlds and considered libraries as one institution to assist immigrants to acculturate in the country of immigration. Although this approach has its own validity, I assume Freire's view of the literacy process as cultural action for freedom" (Chu, 1999, p. 354). The critical nature both of the appropriation and the rebuttal of ideas comes through in this statement.

Categorization of citations as "procedural" tends to be a simpler decision. These kinds of citations are more likely to appear in introductions or literature reviews, and are more likely be nonevaluative mentions of the prior work. For example, McDonough attaches references to several works to a simple statement: "Many researchers and commentators believe that these new venues are ones in which identity, its construction, and its expression have been subtly (or not so subtly) altered (Allen, 1996; Bruckman, 1992; Curtis, 1992; Reid, 1994; Rheingold, 1993; Turkle, 1995)" (McDonough, 1999, p. 855). Using just one more example to bring home the nature of "procedural" citations, Wiegand states that "In 1893 the library profession was already showing signs of specialization that characterized other professions emerging in the Progressive Era [16-18]" (Wiegand, 1999, p. 5). The numbers in brackets indicate three cited works; their citation, however, provides no evidence of explicit epistemic import. Whenever there was any doubt about the categorization of a particular citation, whenever there was the possibility of interpreting the usage either way, I decided to err in favor of the "epistemic" categorization.

A total of 2,792 citations from the 75 articles could be analyzed. "Epistemic" citations accounted for 656 (23.50%), and "procedural" citations numbered 2,136 (76.50%). These findings are very similar to those of my previous study of citations in articles published in the area of sociology of knowledge. In that study 2,787 citations were examined; 661 were categorized as "epistemic" and 2,126 were "procedural" (Budd, 1999, p. 271). There was some variance in the present study by journal title. Articles in *Library Quarterly* had more citations in the "epistemic" category (46.42%) and articles in *Library and Information Science Research* had the smallest proportion of "epistemic" citations (11.08%). Again, the size of this sample may affect the results.

As a corollary to the examination of citations, I was able to classify the citations according to subject area (that is, the subject of the cited work). Some citations could not be classified (such as some Web sites that embrace many subject areas), but subjects for 2,559 could be identified. It should certainly come as no surprise that LIS is the area most frequently identified. Of the cited works, 1,389 (54.28%) could be classified as LIS. Twenty-two other subject areas were represented by the cited works. Second in frequency was computer science, with 326 citations (12.74%). Distinguishing between LIS and computer science sometimes presented a challenge; a cited work was classified as computer science if there was no apparent direct relationship to the LIS field. Beyond LIS and computer science, no subject area represents as much as four percent of the total number of citations. Table 1 lists the subject areas receiving at least two percent of the citations.

Summing Up

As was mentioned earlier, these data may be considered indicators of particular characteristics of journals' contribution to, and reflection of, knowledge in LIS. With regard to authorship, there is some evidence that there are no gross androcentric tendencies and no gross geocentric tendencies. At least the numbers do not indicate repression based on gender or nation of residence. This kind of study is not designed to examine more deeply the actual representation of standpoint epistemologies, however. It might be possible that, deliberately or accidentally, a limited range of knowledge claims is included in the journals, even as there is apparent diversity of authorship. While this study offers some positive evidence of sensitivity to standpoints, a much closer examination of content would be required to assess the grounding of knowledge claims and the justification offered for both methods and conclusions. The indication here is that there is an openness to various standpoints.

The citation phase of the study is consistent with at least one previous similarly-structured investigation. Explicit epistemic acknowledgement is not altogether common in the citation process. One question not addressed here is the extent to which "procedural" citations represent some sort of implicit epistemic link. It may be that both journal referees and readers of published articles look to these kinds of citations for reasons that are based in part on Fuller's social epistemological assumption regarding individuals "having knowledge." It could be that readers assess authors "having knowledge" in part according to the citation to previous work that is regarded as having epistemic import. For instance, if I believe that work of writer A on subject X has shown to be epistemologically sound (justified, coherent, foundational, etc.), then I may look to see if writer A's work is cited by writer B on subject X. If there is an absence of citation, I may be tempted to approach writer B's work with greater skepticism than I would if there were citations to writer A. An examination along these lines might help us better understand a phenomenon that has been effectively tacit.

As is the case with authorship characteristics, the subject dispersion of cited works indicates something of an openness to thought and work done beyond the bounds of LIS. In itself, this dispersion does not mean a lot. Combined with an investigation of epistemic grounding of specific claims, including justificatory assessments made regardless of subject area, these indicators may reflect a catholic attitude towards the growth of knowledge. The indicators may also reflect a broad-based foundation for the shaping of knowledge in LIS, through the inclusion of work done in a variety of subject areas. Within the limitations of this study, it appears that there is cause to be sanguine regarding LIS journals fulfilling some important knowledge-based responsibilities for the members of our profession. Further study can help us evaluate such optimism.

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Table 1
Subject areas of Cited Works

Subject	Number	Percentage
LIS	1,389	54.28
Computer Science	326	12.74
Sociology	101	3.95
Education	87	3.40
Science (including physics, chemistry, etc.)	79	3.09
Communication	76	2.97
Business (including management)	66	2.58
Cultural Studies	61	2.38
Philosophy	59	2.31
Health Sciences	52	2.09

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Knowledge Creation from Australasian LIS Journals: A Content Analysis

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Introduction

This paper reports on a study of the content of LIS journals published in Australasia (e.g., *Australian Library Journal, Fiji Library Journal, New Zealand Libraries, Singapore Libraries*). The study's purpose is to analyse how the content of Australasian LIS journals is affecting knowledge creation among the LIS community of professionals, technicians, academics and students in Australasia. The paper begins by providing contextual information for the study, that is, definitions of key terms and concepts. The contextual information is followed by a literature review which includes an analysis of the LIS publishing industry in Australasia. The next part is a description of the methodology of this research, then the content analysis of the journals, and finally the conclusions drawn from this analysis.

The context

In this research, *Australasia* has been defined as the combined territory of two key geographic areas. The first area is made up of the twelve countries of Southeast Asia (Brunei, Cambodia, East Timor, Hong Kong, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam).[1] The second area is composed of the Oceania nations or territories that are closest to Southeast Asia and are situated in the Southwest Pacific Ocean (Australia, Fiji, Kiribati, Micronesia, Nauru, New Caledonia, New Zealand, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Tuvalu, Western Samoa, Vanuatu).

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[1] I have added East Timor to the list of ten nations included in Yeow-fei's (1999) discussion of the publishing of LIS journals in South East Asia I have included East Timor because it gained independence from Indonesia after Yeow-fei presented his paper at IFLA. I have retained Hong Kong in the list, even though it has come under Chinese political control since Yeow-fei's presentation because it still has a large degree of independence.

Knowledge and knowledge creation are major focuses in this paper, but the terms *knowledge* and *knowledge creation* are used in the literature in the professional literature in many different ways. In this paper, I look at some older and some more recent literature to come to an understanding of what knowledge and knowledge creation might be.

In 1976, D.A. Kemp wrote a book about the nature and properties of knowledge specifically to familiarise librarians and library school students with the subject matter of their disciplinary area. He differentiates between personal (i.e. private) knowledge and social (i.e. public) knowledge, the former being held in the mind of an individual, the latter being possessed collectively by society through its records (p. 25). Kent argues that "social knowledge has at some time been the personal knowledge of an individual: new ideas and new facts, i.e. new knowledge, can only originate in the minds of people" (p. 27). It is equally true, according to Kemp, that there is a reciprocal relationship between social knowledge and personal knowledge: "social knowledge is an essential source of personal knowledge" (p. 27). Kemp's main premise is that access to records, which are the vehicles for communicating social knowledge, is necessary to create personal knowledge. The librarian's role, therefore, is to facilitate the communication of social knowledge between the individual who has created the record and the individual who needs to know about it.

Kemp's perspective is that the librarian is a communication agent whose task involves acquiring, preserving, organising and disseminating the records of social knowledge to help individuals create new personal knowledge. According to Kemp, "social knowledge is the librarian's stock in trade" (p. 28).

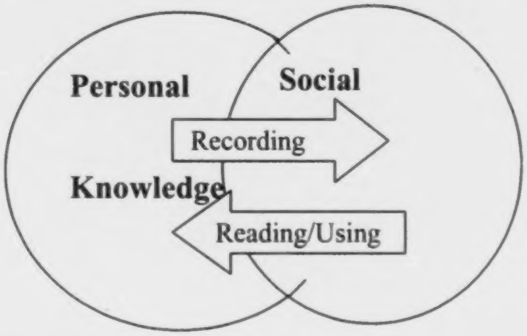

Figure 1. The relationship between personal and social knowledge
(From Kemp 1976, p. 28).

But what of the knowledge of librarians? What do we know about how the librarian's knowledge is created, about how the librarian's personal knowledge becomes the social knowledge for librarianship. If we believe that librarians are like other professional groups, they participate in the knowledge creation process that Kemp described in which there is a reciprocal relationship between personal knowledge and social knowledge as illustrated in **Figure 1**. This process allows individual LIS professionals and researchers to transfer their personal knowledge into social knowledge by means of publication in books and journal articles. These publications are the vehicles for communicating social knowledge to the wider community so that other librarians can create new knowledge through reading the literature. This paper examines the role in this knowledge creation of process of the LIS journals published in Australasia, a part of the world that includes both developed and developing nations.

In the past few years there has been an inundation of journal articles and books about *knowledge* and *knowledge management*. This recent literature generally focuses on what knowledge is, how existing knowledge can be managed and used to create new knowledge, and thus how knowledge creation can give businesses advantages over their competitors.

In *The Harvard Business Review on Knowledge Management* (1996), a compilation of *Harvard Business Review* articles, Ikujiro Nonaka, a Japanese management scientist, says

> Western managers hold a too narrow view of what knowledge is and what companies must do to exploit it. They believe that the only useful knowledge is "hard" (read: quantifiable) data. But there is another way to think about knowledge and its role in business organizations. It is found most commonly at highly successful Japanese companies such as Honda, Canon, Matushita, and Sharp. Managers at these companies recognize that creating new knowledge is not simply a matter of mechanistically "processing" objective information. Rather, it depends on tapping tacit and often highly subjective insights, intuitions, and ideals of employees … they are indispensable tools for continuous innovation (pp. 21-22).

In the same book, David A. Garvin, a professor at the Harvard Business School, examines how organisations incorporate new knowledge and become "learning organizations." He states that "learning organizations are skilled at five main activities: systematic problem solving, experimentation with new approaches, learning from their own experience and past history, learning from the experiences and best practices of others, and transferring knowledge quickly and efficiently throughout the organization" (pp. 52-53).

But what is knowledge? The *Oxford English Dictionary* provides many definitions, but the one that appears most suitable, given the topic of this paper, is as follows:

> In general sense: The fact or condition of being instructed, or of having information acquired by study or research; acquaintance with ascertained truths, facts, or principles; information acquired by study; learning; erudition.[2]

In other words, knowledge is more than information. For knowledge to exist, information (that is, truths, facts or principles) must have been acquired or taken in by someone through study, research or instruction. Knowledge, therefore is the result of incorporating information into that which we already know.

In *Managing Knowledge Workers* (1999), Frances Horibe defines *knowledge* as "a body of information, technique and experience that coalesces around a particular subject" (p. 164). Davenport and Prusak, in *Working Knowledge* (Boston: Harvard Business School Press, 1997), go further, explaining that "knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information …" (p. 5. Thus, knowledge is composed of what we have learned and we draw upon to make sense of our world and to help us progress in what we do.

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[2] *Oxford English Dictionary*, 2nd ed. World Wide Web resource, searched 17 April, 2001. Online version available at: http://dictionary.oed.com/

Journals and Knowledge Creation

Davenport (1997) states that managers tend to use

> information that is timely and rich in contextual cues. We like information that involves sequence and causality (that is, a story), which is presented with humor or given a unique interpretation – information that's visually rich in color, texture and style, and clearly has relevance for our work and lives. (p. 26).

In other words, managers like to use information that is understandable, that is presented in an appealing way and that mirrors a context to which they can relate on both personal and professional levels.

If Davenport is correct, and if, as I would presume, librarians are similar to other types of managers, then librarians will prefer to use the type of information he describes. And, if LIS journals are supporting knowledge creation in LIS, they should be containing papers that are understandable to librarians and other information professionals, are on topics relevant to their professional concerns, and are about contexts with which they can personally relate. More specifically, the LIS journals should communicate this blend of professional concern and personal context in journal papers that aim to assist librarians in systematic problem solving, in experimenting with new approaches, in learning from experience, past history, and the best practices of others, and in helping transfer knowledge quickly and efficiently throughout the organisations in which they work. It is through the publication of these types of papers in Australasian LIS journals that the reciprocal relationship between personal knowledge and social knowledge will flourish and new LIS knowledge will be created in Southeast Asia.

Rochester (1996) provides evidence about why it is important to examine the LIS journal literature (as opposed to the LIS monograph literature or other types of LIS literature) when focusing on knowledge creation. She looked at how bibliometric studies have been used to examine the professional communication in the LIS disciplinary area. She observed that "journal articles seem to be the most important formal way of communicating information for most fields, and this holds true for library and information science" (p. 191). She referred to a bibliometric study of five English language LIS journals by Raptis (1992) that showed journals (41%) were the type of publication cited most frequently by LIS authors, followed by monographs (29.19%), reports (12.91%) and conference proceedings (5.07%). Thus, journal literature is likely to be the primary source of access by librarians to the social knowledge of the LIS disciplinary area.

Given these various perspectives on knowledge and knowledge acquisition, for LIS journals to affect knowledge creation, they must first of all be read by other librarians.
This research has therefore focussed on the mix of content over the past decade in Australasian LIS journals. It seeks to determine the journals' content and how this content may be affecting the professional knowledge bases, that is, the frameworks for incorporating new experiences and information by the LIS communities in the various Australasian countries.

Literature Review

In general, our social knowledge about LIS literature has relied on three bibliometric methods: citation analyses, content analyses and use studies. However, our social knowledge about the LIS literature in Australasia is not great. Only a small portion of the literature about LIS literature has focused on Southeast Asian or Oceanian LIS literature. This literature review commences with an examination of the LIS publishing industry in Australasia, with specific reference to LIS journal publishing.

The LIS Publishing Industry in Australasia

In 1999 at the 65th IFLA Council and Conference in Bangkok, Jaffe Yee Yeow-fei presented a paper entitled "The publishing of library and information science journals in Southeast Asia – an overview" (Yeow-fei, 1999). In this paper, Yeow-fei made the following key points:

- The publishing of LIS journals, or more specifically, LIS journals and newsletters in Southeast Asia, emanates from four groups of organisations: libraries, library associations, library schools and commercial publishers.
- There is a high turn over of titles, demonstrating the difficulty in Southeast Asia of publishing in this area. The ones that have survived are in general supported and sponsored by organisations that are themselves stable, whereas "failures are mainly due to poor funding, staffing and inadequate support in the gathering of editorial material."
- Most of the journals are published by national associations in the language of the country[3] therefore the circulation and readership tend to be members of the associations and hence internal to the country of the association.
- The contents of journals "tend to be heavy on news and local topics" and there is very little coverage of the region as a whole or of international issues.

With regard to the level of economic development and its relationship to the publishing output of the Southeast Asian countries, Yeow-fei remarked on the large gaps between nations.

> The levels of development are very uneven and the differences can be great. The big gap between them signifies a big difference between the publishing industry of the countries in terms of the number and quality of publications published annually, including LIS journals. (Yeow-fei, 1999)

Yeow-fei noted that in Southeast Asia, only Singapore can be described as a "developed country." When the focus is the Oceania nations in Australasia, only Australia and New Zealand can similarly be described as "developed countries." Therefore, the gap in development described by Yeow-fei extends across the whole of Australasia, with Singapore, Australia and New Zealand having the most developed publishing industries in the region.

The high turn over of LIS titles described by Yeow-fei is not limited to the less developed countries nor to association publications. Even in the developed nations, LIS journals have not enjoyed a high degree of stability during the past decade. The *Singapore Library Journal*, for example, ceased publication in 1993. In the 1980s, Judge (1988; 1989) found that uncertain funding and ad hoc management practices caused a high degree of instability among the Australian-based LIS journals. From outward appearances, the situation in the 1990s seems to have changed very little. The *Australian Library Review* lasted until 1995, and the *Australian & New Zealand Journal of Serials Librarianship* was published only from 1990 to 1994. In New Zealand, the country's only LIS journal, *New Zealand Libraries*, appeared to have reached its end in 1997 when the New Zealand Library and Information Association got into serious financial difficulties. However, in 1999, the Association resumed publishing *New Zealand Libraries*. The two commercially published LIS journals from Southeast Asia, *Asian Libraries* and the *Australian & New Zealand Journal of Serials Librarianship*, also ceased publication during the 1990s. Although its publisher, MCB University Press, claims *Asian Libraries* was merged into *New Library World*, an analysis of the content from the latter journal issues from each of 1998, 1999 and 2000 showed that there were no papers specifically about LIS activities in the Australasian nations.

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[3] The exceptions are the journals from the library associations in Singapore and the Philippines which are published in English.

An important positive change worth noting since Yeow-fei's paper was presented in 1999, is that more and more of the professional association newsletters from the various countries are now available on the World Wide Web. Nonetheless, the readership of association published material is likely to be heavily concentrated among members of the specific association for several reasons. First, the association publications that are available in a paper format are most likely to be obtained through subscriptions based on association membership. Even though publication of many of the newsletters online via the WWW is providing greater opportunity for a broadening of the readership, language barriers still restrict intellectual access to a small readership. The *VASTID Newsletter* from the Vietnam Association for Scientific and Technical Documentation, which was founded in April, 2000, is an example of a newly-established paper-based association newsletter published in a national language.

A more significant problem is that most of the association newsletters are not included in LIS indexing publications and databases. As a result, even when the newsletters contain professional or research papers that might help in the creation of new knowledge they will be primarily of use as current awareness tools. This is because very few people will be able to retrieve those papers when they are seeking information to assist with research or practical applications. Those publications that are indexed are the more substantive journals, journals that come predominantly from the developed countries. The only currently published LIS journals from, or focusing on, Australasia that are published outside of Australia and are indexed in LIS indexing databases appear to be *New Zealand Libraries* and the *Malaysian Journal of Library and Information Science*. The latter journal, however, is not held in New Zealand so its content was not available for this research.

Citation analyses

LIS journals contribute to knowledge creation when their content has had an impact on their readers' personal knowledge creation processes. The LIS journals, in this sense, help knowledge creation by providing vehicles of communication for the social knowledge created by both scholars and professionals within the LIS disciplinary area. Thus, when past articles from LIS journals are cited in newly published articles, those citations provide evidence of the LIS journals' contributions (as vehicles of scholarly and professional communication) to new knowledge creation.[4]

Although the study being reported in this paper has not used citation analysis as a methodology, it is worthwhile reporting on several such studies related to Australasian LIS journals because they provide valuable insights into the roles of these journals as vehicles of communication in the knowledge creation process. Of particular interest are two citation analyses of Australian library literature and two from New Zealand.

The impact of Australasian LIS journals as determined from citation indexes was studied by Rochester (1996). She points out that the two major citation indexes, *the Science Citation Index*, and the *Social Science Citation Index*, include primarily the major mainstream journals from the US and UK (p. 192). As a result, in those major citation indexes there are very few LIS journals, and none are from Australia. I used the search engine on the ISI web site (http://sunweb.isinet.com/isi/index.html) to search the master journal list, and I found that there were no LIS journals from Australasia included in any of the ISI citation index products.[5] This failure to include Australasian LIS journals may suggest that ISI's editorial bodies do not consider those journals to be important vehicles for communicating LIS social knowledge. If this is the case, the ISI editorial bodies perceive the Australasian LIS journals to be unimportant to the process of creating new knowledge in this discipline.

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[4] Rochester (p. 192) points out that there are problems with employing citations as measures of use, since we cannot tell the reason that the work was cited: was it used, was it rejected, was it considered an excellent source, a poor source, etc. Nonetheless, citations are excellent sources of evidence that the articles have been read, and therefore have influenced knowledge creation in some way.

[5] The searches were conducted on 13 April, 2001, using the terms "library" "librarian" "librarianship" "libraries" and "information" in separate searches.

In her literature review, Rochester (1996) reported a study by Herman (1991) of US and UK authors' use of international LIS literature. Using literature from 1987, Herman found that UK and US journals received 91% of the citations, and that UK authors cited articles from UK journals 50% of the time, from US journals 42% of the time, and 8% from other journals. On the other hand, US authors cited from US journals 91% of the time, from UK journals only 5% of the time, and from other journals only 4% of the time. Rochester pointed out that Herman questioned whether the parochial nature of the US journals was evidence that American authors perceived UK literature (and presumably literature from other countries) to be of inferior quality. Rochester (p. 194) noted that there have been no similar citation analyses of Australian LIS literature.

Royle (1994) used the two major citation indexes mentioned above and the *Journal Citation Reports* to study the citation of Australian journals in the sciences and the social sciences. Not surprisingly, Royle found that papers from Australian journals were cited most frequently in papers appearing in Australian journals. In commenting on the Royle study, Rochester (1996) noted that "we could expect similar findings for library and information science journals" (p. 194). In other words, LIS social knowledge created in Australia is more likely to be incorporated into new knowledge in Australia than elsewhere.

In New Zealand, Attwood (1991) examined the citations in articles published in *New Zealand Libraries* in the period from 1980 to 1990. Attwood found that the authors referred to New Zealand literature in 37.1% of their citations, more than any other nation. Material cited from United States sources accounted for 25.9% of all references, followed by Britain (16.5%) and Australia (6.0%). Material published in those four nations accounted for 85% of all references, but Australasian sources were limited to New Zealand and Australia, amounting to 43.1% of all citations.

In a research project for his MLIS degree, Rule (1998) extended Attwood's study by examining the citations in the articles in *New Zealand Libraries* from 1991 through 1997. He found that even though New Zealand material was cited 35.7% of the time, material from the United States was cited 41.4% of the time. British material was cited 9.7% of the time and Australian material was cited only 7.2% of the time. Together, those four nations accounted for 94% of the references made *in New Zealand Libraries*. Interestingly, there was a dramatic increase in the number of citations from the United States and a substantial decrease in the amount from the United Kingdom. However, the figures from Australasia were almost identical to those discovered by Attwood. In Rule's study, once again only New Zealand and Australian material was cited from Australasian sources, and their combined total was 42.9% of all citations.

Another aspect of interest in the two previous studies was the fact that the primary formats for the cited items were journals and monographs. In Attwood's study, 41.5% of references were to journal articles, followed by 31.2% for monographs, whereas Rule found that journal articles accounted for 50.1% of references and monographs accounted for 40%. Journal articles, at least in *New Zealand Libraries*, have been taking on an increasing importance in the creation of new knowledge.

With reference to the age of the cited items, Attwood found that about 50% of the items were 0-5 years old, while Rule found that almost 55% of the cited material from 1991 to 1997 in *New Zealand Libraries* were 0-5 years old. Rule's 1990s study found that only 19% were between 6 and 10 years old, whereas the 1980s study found that 25% were in this age bracket. As for the sources of the cited items appearing in *New Zealand Libraries*, both Attwood and Rule found that a very broad range of journals had been used, many of which were from outside the LIS disciplinary area.

These studies suggest that the LIS journals in Australia and New Zealand are used primarily in their own countries to help the librarians create new knowledge. The New Zealand studies also suggest that journal literature is increasingly used as a source of input for new knowledge and that the information being used is decreasing in age. Thus it is taking less time for social knowledge to impact on personal knowledge and presumably for personal knowledge to impact on social knowledge.

Content Analyses

Researchers have also studied the content of journals to determine such things as the research topics in a disciplinary area and how they has changed over time. Rochester (1995) commented that "content analysis consists of extracting and evaluating in a systematic and generally quantitative manner the occurrences of the manifest and latent content of a body of textual or audiovisual material, in order to uncover its key symbols and themes and to compare them one to another" (p. 163). With specific reference to LIS literature, content analyses have been used, for example, to determine the nature of LIS literature in general (e.g., Jarvelin and Vakkari, 1990, 1993) and in specific countries (e.g., Cano, 1999; Rochester, 1995).

The ratio of articles in LIS that are of a research nature as opposed to an applied or a practical nature has been the focus of several content analyses. Cano (1999) cites studies by Freehan et al. (1987) and Harter & Hooten (1992) as examples to support her statement that

> random sampling of the conglomerate of the L&IS journals will inevitably include applied articles as well as theoretically-based articles since a large portion of the L&IS literature is of a practical nature reflecting the problems faced by professionals engaged in current practice. (p. 675)

Freehan et al. found that 50% of the articles in their sample were of a practical nature whereas Harter and Hooten reported that 47.3% of articles in their sample of JASIS, a research journal, were of a non-theoretical nature.

Most LIS content analyses have focused on the L&IS literature produced in North America and the U.K. (Cano, 1999). Rochester and Vakkari (1998), however, reported on a series of national studies of LIS research literature conducted by different researchers who covered Finland, Spain, Turkey, Australia, China and the UK. These studies were based on the research methodology used by Jarvelin and Vakkari (1990, 1993) whose analyses of LIS literature focused only on research results and metatheoretical statements, and excluded professional writings in order to ensure that the knowledge base examined was not "pseudoscience" (Rochester and Vakkari, 1998, p. 167). Rochester and Vakkari concluded that considerable variation existed in the research emphases and trends in the examined countries due to their cultural differences, but there were also some similarities which demonstrated that cross-national interests existed (p. 173).

The Australian content for Rochester and Vakkari's international comparison was drawn from a study by Rochester (1995), who analysed the literature in *The Australian Library Journal* and *Australian Academic & Research Libraries* from 1985 through 1994. Rochester found that only 22% of the articles appearing *in The Australian Library Journal* and 27% of those in *Australian Academic and Research Libraries* were research articles (pp. 166-167). The aggregated total of research articles in the two journals was 24% of the total number of articles. When the decade was divided into two five-year periods, Rochester found that there was a 5% increase in the total number of research articles appearing in the two journals in the second period. However, the total number of articles increased overall by 33% and the percentage of research articles actually decreased from 27.2% of the total in the first period to 22.4% in the second period.

Rochester (1995) also found that the strongest area of interest in Australian LIS research was library and information services, which accounted for 40% of the total research published in those two journals. The second most popular topic was information seeking (20%), followed by library history (14%). When the research on library and information services was subdivided, the most popular subtopics were library use (10%), administration (9%) and collection studies (7%). The most popular research methods used in Australia were surveys (44%), historical methods (14%) and discussion (10%).

The situation in New Zealand has received less study. Calvert (1990) found that only 15.2% of the articles in *New Zealand Libraries* in the 1980s were research based. More recently, Rule (1998) found that from 1991-1997, the number of the research-based articles in *New Zealand Libraries* had risen to 21.7%. As Rule noted, "given these results one could say that *New Zealand Libraries* became even more hospitable to research between 1990 and 1997" (p. 9). With regard to the subject coverage of the content of the articles, Rule found that it was highly diffuse. He concluded that the diversity of topics was both a strength and weakness.

> It is this wide range of coverage that was a strength of the journal in its information provision role but it did, at the same time, limit its development in terms of being a vehicle for scholarly discourse. As one would expect information about computer-based technology, management techniques, and biculturalism were prominent and reflected technological and cultural developments during the period and the professionally-based market focus of the journal. (p. 6)

The differences found in the content analyses between Australia and New Zealand, like those between the countries compared in Rochester and Vakkari (1998), are likely due to the cultural differences and locally specific topics of interest.

Use studies

LIS researchers have employed used studies for several ends. One focus of use studies of the LIS literature has been the amount of use librarians make of the LIS literature. Rochester (1996) commented that the "findings are rather depressing, because diffusion of information to improve library and information science services is not as widespread nor international as we would wish" (p. 191). The results of a study by Finnie, Frame and Steward (2000), unfortunately, support these findings with regard to New Zealand. They found that "many librarians, because of time restraints and for other reasons, do not keep up with professional reading and may not appreciate the value of research" and that "few scholarly articles by New Zealand librarians appear in the literature, either in New Zealand or overseas" (p. 83).

A second focus of use studies has been on the actual patterns of use of the LIS literature by librarians and paraprofessionals. Montanelli and Mak (1988) examined the use patterns for LIS subjects in the journal articles requested for interlibrary loan (ILL) from the collection at the University of Illinois at Urbana-Champagne in a six month period of 1986. However, their study was limited by the fact that the most frequently read American LIS journals, *American Libraries*, *College & Research Libraries*, and *Library Journal*, were most likely available locally, and hence articles in them would not be requested through ILL. Nonetheless, one of their key findings was that "those subjects pertaining to the practical and technical aspects of librarianship were … the most popularly requested topics" (p. 779). Thus, they concluded that "the results … would support the hypothesis that librarians use the library literature to obtain practical and technical assistance" (p. 779).

Brown and Duguid (2000), and Davenport and Prusak (1998), likewise, comment that the staff members within an organisation learn from the stories of other staff members. Thus, papers in which professionals or researchers focus on library practices and procedures would likely be used to a greater degree by LIS practitioners to create or increase knowledge than would theoretical papers that focus on amorphous concepts or hypothetical situations.

Methodology

As a starting point, this research aims to add to the findings of Calvert (1990), Attwood (1991) and Rule (1998) regarding the content of *New Zealand Libraries,* and of Rochester (1995) with regard to the *Australian Library Journal* and *Australasian Academic and Research Libraries.* This study focuses on two different aspects of the Australasian LIS literature – the proportion of the content that is scholarly or professional and the actual topic area of the scholarly and professional papers.

As the basis for determining the nature of journal articles in their content analyses of *New Zealand Libraries*, both Rule (1998) and Calvert (1990) used a set of four categories that was originally determined by Rayward (1990). The four categories are:

1. **Practical literature:** concerned with details of systems, procedure, organisation, application; "can range from the insufferably trivial to the impenetrably complex" (Rayward, 1990, p. 127). Calvert (1990) calls this category the "How I run my library good" type of article (p. 19).
2. **Reportage** of news, description and discussion; "ranges from the trite and flip to the portentous" (Rayward, p. 127).
3. **Hortatory literature;** "is filled with 'musts,' 'oughts,' 'shoulds,' 'bewares,' 'henceforths,' and 'if we do nots' (p. 127-128); is a literature of self-congratulation and of self-recrimination" (p. 128).
4. **Scholarly literature;** "ranges from the repetitious, superficial and pretentious, through the deeply considered and meticulously researched, to mind-numbing pedantry and dullness (p. 128). According to Calvert, "this may be experimental research, survey research or historical research" (p. 19).

Rochester (1995), on the other hand, employed the classification scheme for thematic characteristics of LIS research literature devised by Jarvelin and Vakkari (1990). This scheme has 11 major classes, some with subclasses (the numbering system used here is my own):

100	The Professions	
200	Library History	
300	Publishing (including book history)	
400	Education in LIS	
500	Methodology (as the study of research methods	
600	Analysis of LIS (literature based on both empirical and theoretical)	
700	LIS Service Activities	
	701	Circulation or Interlibrary Loan Activities
	702	Collections
	703	Information or Reference Services
	704	User education
	705	Library Buildings or Facilities
	706	Library Administration or Planning
	707	Library Automation (except when concerned with some particular activity)
	708	Other Library or Information Service Activities
800	Information Storage and Retrieval	
	801	Cataloguing
	802	Classification or Indexing (process or languages)
	803	Information Retrieval
	804	Bibliographic Databases or Bibliographies
	805	Types of Databases (Factual, textual, numeric)
900	Information Seeking	
	901	Information Dissemination
	902	Use or Users of Channels or Sources of Information

  - 903 Use of Library and Information Services
  - 904 Information Seeking Behaviour (persons)
  - 905 Information Use
  - 906 Information Management
- 1000 Scientific and Professional Communication
  - 1001 Scientific or Professional Publishing
  - 1002 Citation Patterns and Structures
  - 1003 Other Aspects of Scientific or Professional Communication
- 1100 Other LIS Aspects

Although Rochester (1995) compared the number of research articles and professional or practice-based articles in the two Australian journals, she examined the thematic content only of the research articles. To identify the research articles, she used the definition of research adopted by Jarvelin and Vakkari (1990): "research is an inquiry, where the goal is to elicit, through a systematic method, some new facts, concepts or ideas" (p. 401).

I have used Jarvelin and Vakkari's definition of research as the basis for determining the *scholarly papers* in my analysis. I categorised a paper as scholarly if the author described a systematic methodology for a planned project aimed at eliciting some new facts, concepts or ideas, or such a methodology was evident in the paper. Otherwise, the report of a project was categorised as a professional *reportage* paper. To categorise the content of the papers, I used the above list of 11 main classes and their subclasses with two additions. I added category 806 for "information networks and communication networks" and category 1101 for "information policy". Category 806 was used for papers about the Internet, intranets, subject-based information networks, etc., and category 1101 for papers on topics such as copyright or the digital divide.

Because the primary purpose of this paper is to determine how Australasian LIS journals create knowledge, it made sense to select a representative sample of the publications rather than being comprehensive. Coverage was based on a sample that for each journal consisted of one issue per year from 1991 through 2000. To ensure that there was diversity in the coverage, a different issue number was selected for each year of a publication. The following rotation was used for quarterly publications: in 1991, issue 1 was selected; in 1992, issue 2 was selected; in 1993, issue 3 was selected, in 1994, issue 4 was selected; in 1995, issue 1 was selected, and so on. For semi-annual publications, in the odd years, issue number 1 was selected, whereas in the even numbered years issue number 2 was selected. However, not all of the desired issues were procurable for each journal. Nonetheless, 93% of the desired issues were obtained and analysed. Two of the journals that I had intended to examine (i.e., *Access*, from the Australian School Library Association, and the *Malaysian Journal of Library & Information Science)*, were not available to me. The former had disappeared from the stacks of the National Library of New Zealand, whereas there are no subscribers in New Zealand to the latter publication.

The Content Analysis Findings

The results of the current study compare closely with the results of the studies mentioned earlier. For example, the percentage of scholarly papers in the current analysis of *Australian Academic & Research Libraries* and *the Australian Library Journal* is similar with those of Rochester (1995). And, the results from the current analysis of *New Zealand Libraries* are similar with those of Calvert (1990) and Rule (1998), as can be seen in Table 2 below.

Table 2: Comparison of Current Results with Earlier Researchers

Journals Analysed	Researcher	Scholarly papers	Professional Papers
Australian Academic & Research Libraries, Australian Library Review	Rochester (1995)	24.0%	76.0%
	Current study	27.1%	72.9%
New Zealand Libraries	Calvert (1990)	15.2%	84.8%
	Rule (1998)	21.7%	79.3%
	Current study	14.7%	85.3%

In the current research, the full sample contained 83 scholarly papers and 370 professional papers. The figures for the 11 journals analysed are presented in Table 3 below. This mix of professional and scholarly papers is at a ratio of approximately 4.5 professional papers (i.e., containing practical, reportage and Hortatory information) to 1 scholarly paper (i.e., providing research-based information) within the sample.

Table 3: Comparison of Number and Percentage of Scholarly and Professional Papers in Australasian Journals[6]

Journal	Scholarly & Professional Papers	Scholarly Papers	Professional Papers
AARL	71	15 (21.1%)	56 (78.9%)
ALJ	62	21 (33.9%)	41 (66.1%)
ALL	47	1 (2.1%)	46 (97.9%)
ALR	20	1 (5.0%)	19 (95.0%)
ANZJSL	23	9 (39.1%)	14 (60.9%)
APLIS	56	15 (26.8%)	41 (73.2%)
Asian L	56	8 (14.3%)	48 (85.7%)
Cat Aust	36	4 (11.1%)	32 (88.9%)
Fiji LJ	31	0 (0.0%)	31 (100%)
NZ Libs	34	5 (14.7%)	29 (85.3%)
Singapore Libs	17	4 (23.5%)	13 (76.5%)
Totals	453	83 (18.3%)	370 (81.7%)

The amount of journal *space* devoted to scholarly papers in the 11 journals, however, is greater than suggested by the number of papers in each category. This discrepancy is because, as can be seen in Table 4 below, scholarly papers tend to be over 50% longer than professional (i.e. 11.5 pages as compared to 7.5 pages). Thus, the *number of pages* devoted to the types of papers appears to be an important consideration when analysing journal contents.

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[6] AARL = Australian Academic & Research Libraries; ALJ = Australian Library Journal; ALL = Australian Law Librarian; ALR= Australian Library Review; ANZJSL = Australia & New Zealand Journal of Serials Librarianship; APLIS = Australasian Public Libraries and Information Services; Asian L = Asian Libraries; Cat Aust = Cataloguing Australia; Fiji LJ = Fiji Library Journal; NZ Libs = New Zealand Libraries; Singapore Libs = Singapore Libraries

Table 4: Average Number of Pages in Scholarly and Professional Papers

Category of Paper	Number of Papers	Number Of Pages	Average Number of Pages per Paper
Scholarly	83	955	11.5
Professional	370	2782	7.5

In this study, the Scholarly content of the journals accounted for 25.6% of the journals' space, even though the number of Scholarly papers was only 18.6% of the total. The ratio here is about 3 Professional pages to 1 Scholarly page which is an increase of about 50% compared with the ratio based on the number of papers. The data for the space occupied in the 11 journals by Scholarly and Professional pages are provided in Table 5 below.

Table 5: Comparison of Number of Pages and Percentage of Pages in Scholarly and Professional Papers in Australasian Journals

Journal	Scholarly & Professional Pages	Scholarly Pages	Professional Pages
AARL	588	172 (29.2%)	416 (70.7%)
ALJ	645	259 (40.2%)	386 (59.8%)
ALL	362	12 (3.3%)	350 (96.7%)
ALR	131	8 (6.1%)	123 (93.9%)
ANZJSL	278	144 (51.8%)	134 (48.2%)
APLIS	358	163 (45.5%)	195 (54.5%)
Asian Libs	464	87 (18.8%)	377 (81.2%)
Cat Aust	387	36 (9.3%)	351 (90.7%)
Fiji LJ	241	0 (0.0%)	241 (100%)
NZ Libs	138	27 (19.6%)	111 (80.4%)
Singapore Libs	145	47 (32.4%)	98 (67.6%)
Totals	3737	955 (25.6%)	2782 (74.4%)

Topic areas and paper types

Data were gathered both for the *broad topic areas* (i.e. at the hundreds level) and the *specific topics* (i.e., at the unit level) in Jarvelin and Vakkari's (1990) classification scheme described earlier.
Among the Scholarly papers, the main *broad topic area* studied was LIS Service Activities (topic area 700) at 29.3% of papers and 29.8% of pages, followed by Information Seeking (topic area 900) at 18.3% of papers and 16.3% of pages. In the Professional papers, the main broad topic area likewise was Library Service Activities (topic area 700) at 45.9% papers and 45.1% pages, followed by Information Storage and Retrieval (topic area 800) with 21.0% of papers and 27.5% of pages. Those two areas together accounted for 66.9% of Professional Papers and 72.6% of all Professional Pages. The full range of topic areas for Scholarly and Professional papers is shown in Table 6.

Table 6: **Number and Percentage of Scholarly and Professional Papers and Pages by Broad Topic Areas**

	Scholarly		Professional	
Topics	**Papers**	**Pages**	**Papers**	**Pages**
100s The Professions	10 (12.0%)	109 (11.4%)	16 (4.3%)	136 (4.9%)
200s Library History	8 (9.8%)	103 (10.8%)	20 (5.1%)	103 (3.7%)
300s Publishing	9 (11.0%)	120 (12.6%)	10 (2.6%)	75 (2.7%)
400s Education in LIS	1 (1.2%)	12 (1.3%)	16 (4.1%)	125 (4.5%)
500s Methodology	0 (0.0%)	0 (0.0%)	2 (0.5%)	11 (0.4%)
600s Analysis of LIS	1 (1.2%)	5 (0.5%)	1 (0.3%)	8 (0.3%)
700s LIS Service Activities	24 (29.3%)	285 (29.8%)	179 (45.9%)	1257 (45.1%)
800s Information Storage & Retrieval	7 (8.5%)	73 (7.6%)	82 (21.0%)	764 (27.5%)
900s Information Seeking	15 (18.3%)	156 (16.3%)	10 (2.6%)	100 (3.6%)
1000s Scientific & Prof. Communication	5 (6.1%)	56 (5.9%)	15 (3.8%)	93 (3.3%)
1100s Other Aspects	3 (3.7%)	36 (3.8%)	19 (4.9%)	110 (3.9%)
Total	83 (100%)	955 (100%)	370 (100%)	2782 (100%)

When focussing more narrowly on the *specific topics* of the papers, four specific topics together accounted for 44.4% of the Scholarly papers and 44.0% of the Scholarly pages in the 11 journals. Similarly, four *specific topics* together accounted for 41.9% of all Professional papers and 40.8% of Professional pages in the journals. However, the four principal specific topics were different ones in each of the two categories of papers as can be seen Table 7. (Note that I added area 806 below to Jarvelin and Vakkari's topic areas because of the concentration of papers during the 1990s on "new" topics such as the Internet and intranets).

Table 7: **Number and Percentage of Papers and Pages in the Four Principal *Specific Topic* Areas in both Scholarly and Professional Papers**

Principal Specific Topic Areas		Scholarly		Professional	
		Papers	Pages	Papers	Pages
902	Use or Uses of Sources of Information	**10 (12.0%)**	**117 (12.2%)**	3 (0.8%)	26 (0.9%)
100	The Professions	**10 (12.0%)**	**109 (11.4%)**	15 (4.0%)	117 (4.2%)
300	Publishing (Including Book History)	**9 (10.8%)**	**120 (9.6%)**	10 (2.7%)	75 (2.7%)
200	Library History	**8 (9.6%)**	**103 (10.8%)**	20 (5.4%)	103 (3.7%)
706	Library Administration & Planning	6 (7.2%)	62 (6.5%)	**67 (18.1%)**	**443 (15.9%)**
702	Collections	6 (7.2%)	69 (7.2%)	**33 (8.9%)**	**263 (9.5%)**
700	General LIS Service Activities	4 (4.8%)	59 (6.2%)	**30 (8.1%)**	**270 (8.1%)**
806	Information and Communication Networks	2 (2.4%)	18 (1.9%)	**25 (6.8%)**	**204 (7.3%)**

Note: **Numbers (and percentages) in bold** represent the principal specific topics for the column categories.

As one would expect given the principal specific topics studied, among the 83 Scholarly papers, the most used methodologies were surveys (29 papers representing 34.9%) and historical studies (28 papers representing 33.7%). Among the 370 Professional papers, 227 were *Reportage* style papers (61.3%), 105 were categorised as *Practical* papers (28.4%), and 38 were *Hortatory* papers (10.3%).

These data inform us that the Scholarly papers in the Australasian LIS journals contained relatively high concentrations of survey research about Use and Users of Information Sources and of historical research about the Professions (primarily librarianship), Publishing, and Library History. The Professional papers, on the other hand, which were far greater in number and space occupied, were primarily Reportage articles that focused on Library Administration and Planning, General LIS Service Activities, Collections and Information and Communication Networks. The number of Practical papers amounted to less than half of the Reportage papers.

While both the Scholarly papers and the Professional papers had high concentrations in the broad area of LIS Service Activities (area 700), the concentration was much greater in the Professional papers than in the Scholarly papers. This is mainly because the content of the Professional papers extended across several specific topics included among the LIS Service Activities, whereas in the research literature the focus was mainly on Library Administration and Planning and on Collections. It was not surprising that Library Administration and Planning (topic area 706) was the most popular topic overall when Scholarly and Professional papers are considered in combination, with 73 papers, equating to 16.1%, and 505 pages equating to 13.5%, of the total numbers.

The main *form* of the Professional literature was Reportage papers (61.3% of the number and 60.7% of the pages). Reportage papers tended to provide an overview or discussion of principals and practices in these topic areas. Practical papers accounted for 28.4% of the number of Professional papers and 30.8% of the pages. The Professional papers tended to describe more specific practices or systems, usually within given institutions. Hortatory papers were only 10.3% of the number and 8.5% of the pages of the Professional papers.

The Scholarly papers and Professional papers in the Australasian LIS literature were providing LIS professionals and researchers predominantly with information of two main kinds. The Scholarly papers were helping the community to understand the uses and users of information sources, and to learn about librarianship as profession, about the publishing industry and about library history. On the other hand, the Professional papers were much more focused on practical issues. They were providing members of the LIS community with information from which they could determine trends, and could come to an understanding of current issues in administration and planning, in collection management, in LIS service activities in general, and in information and communication networks.

Other papers

The data about scholarly and professional papers, however, do not tell the whole story about Australasian LIS journals. In my analysis I found that there was a third major category of papers that earlier researchers did not identify in their analyses. I called this category *Other papers*. The content of Other papers focused primarily on delivering news about the profession's conferences and people, on informing people about new products and information resources, on reviewing books for them to help them become better professionals, and on telling them about new information resources to help them keep current. Also included among the Other papers were editorial comments, letters to the editor, and news from specific groups or areas (e.g. Publishers News, Pacific News, and State News). Table 8 below provides data for the three categories of papers in each of the examined journals and combined data for the Professional and Other papers (after all, the content in the Other category is largely a type of reportage).

Table 8: Comparison of Number and Percentage of Scholarly Papers, Professional Papers and Other Papers in Australasian Journals

Journals	Total Papers	Scholarly Papers	Professional Papers	Other Papers	Combined Professional & Other papers
AARL	93	15 (16.1%)	56 (60.2%)	22 (23.7%)	78 (83.9%)
ALJ	86	21 (24.4%)	41 (46.7%)	24 (27.9%)	65 (75.6%)
ALL	114	1 (0.9%)	46 (40.4%)	67 (58.8%)	113 (99.1%)
ALR	28	1 (3.6%)	19 (67.8%)	8 (28.6%)	27 (96.4%)
ANZJSL	30	9 (30.0%)	14 (46.7%)	7 (23.3%)	21 (70.0%)
APLIS	82	15 (18.3%)	41 (50.0%)	26 (31.7%)	67 (81.7%)
Asian Libs	73	8 (11.0%)	48 (65.8%)	17 (23.3%)	65 (89.0%)
Cat Aust	43	4 (9.3%)	32 (74.4%)	7 (16.3%)	39 (90.7%)
Fiji LJ	34	0 (0.0%)	31 (91.2%)	3 (8.8%)	34 (100%)
NZ Libs	42	5 (11.9%)	29 (69.0%)	8 (19.0%)	37 (88.1%)
Singapore Libs	19	4 (21.1%)	13 (68.4%)	2 (10.5%)	15 (78.9%)
Totals	644	83 (12.9%)	370 (57.5%)	191 (29.7%)	561 (87.1%)

The *number* of Other papers, however, is not an ideal reflection of the amount of space occupied in the journals by this category. This is because of the difficulty in determining what exactly constituted a paper for the Other category. For example, a selection of six book reviews could be counted as six papers or one paper (I counted them as one) - whereas there was no ambiguity in determining the number of pages. As can be seen below in Table 9, the number of pages in the Other papers accounted for 27.5% of all pages in the examined journals.

Table 9: Comparison of Number of Pages and Percentage of Pages in Scholarly, Professional and Other Papers in Australasian Journals

Journal	Total Pages	Scholarly Pages	Professional Pages	Other Papers	Combined Professional & Other pages
AARL	713	172 (24.1%)	416 (58.3%)	125 (17.5%)	541 (75.9%)
ALJ	804	259 (32.2%)	386 (48.0%)	159 (19.8%)	545 (67.8%)
ALL	559	12 (2.1%)	350 (62.6%)	197 (35.2%)	547 (97.9%)
ALR	715	8 (1.1%)	123 (17.2%)	584 (81.7%)	707 (98.9%)
ANZJSL	302	144 (47.7%)	134 (44.4%)	24 (7.9%)	158 (52.3%)
APLIS	472	163 (34.5%)	195 (41.3%)	114 (24.2%)	309 (65.5%)
Asian Libs	599	87 (14.5%)	377 (62.9%)	135 (22.5%)	512 (85.5%)
Cat Aust	420	36 (8.6%)	351 (83.6%)	33 (7.9%)	384 (91.4%)
Fiji LJ	247	0 (0.0%)	241 (97.6%)	6 (2.4%)	247 (100%)
NZ Libs	176	27 (15.3%)	111 (63.1%)	38 (21.6%)	149 (84.7%)
Singapore Libs	149	47 (31.5%)	98 (65.8%)	4 (2.7%)	102 (68.5%)
Totals	5156	955 (18.5%)	2782 (54.0%)	1419 (27.5%)	4201 (81.5%)

I also conducted an analysis of the *Other Papers* category for *form* of paper, but not for topic. The largest form was Book Reviews (46 papers and 931 pages) accounting for 24.1% of Other papers and 65.6% of Other papers' pages. However, this large discrepancy between papers and pages of Book Reviews is caused by the *Australian Library Review*, which contained only 5 book reviews or 17.9% of its Other papers, but they amounted to 578 or 80.8% of its Other papers' pages. However, even after the *Australian Library Review's* Other paper content is eliminated from the data, Book Reviews still stand out as the largest form with 42.1% of the total of Other papers' pages. *News* reports came second (316 pages in 73 papers) which amounted to 22.3% of Other pages and 38.2% of Other papers. The remaining Other papers were divided among Editorials, Letters to the Editor, Information Sources and LIS Abstracts.

While this analysis of the Other papers content does not provide any startling results on its own, when the data are added to the Professional papers, the ratio of professional to scholarly papers and pages changes quite dramatically from that given earlier. With this addition of Other papers, the ratio has become 6.8 professional papers to 1 scholarly paper. This is an increase of about 50% in the ratio of Professional to Scholarly papers. With the addition of Other papers' pages to Professional papers' pages, the ratio rises from the earlier level of 3 professional pages to 1 scholarly page to a level now of 4.4 professional pages to 1 scholarly page.
This indicates that the Australasian LIS professional journals have a far greater emphasis on professional papers than on scholarly papers than was previously thought.

Conclusions

The above findings show that during the past decade the 11 Australasian LIS journals reported much less scholarly material than we have been led to believe from the findings of Rochester (1995), Calvert (1990) and Rule (1998). The results of the current research also demonstrate that the LIS journals in Australasia are predominantly conveyors of Reportage of news, description and discussion, and to a lesser extent they are communicators of Practical information pertaining to specific systems and practices. However, the

Australasian journals also convey some empirical research findings pertaining to uses and users of information sources, as well as the results of research pertaining to the profession, to the history of individual libraries and librarians, and to the publishing industry. These are the main strengths of the Australasian library journals examined in this study.

When one considers that the predominant publishers of Australasian LIS journals have been, and will continue to be professional associations, these findings make good sense. The LIS journals convey some scholarly information, but they predominantly report on what has been occurring in professional practice in the geographic location of the publishing association. They also provide resources, such as book reviews and reports about new information resources in specific areas (e.g. law librarianship, serials librarianship), and news about events, organisations and people. In other words, the Australasian LIS journals provide resources that help the members of the LIS community keep their knowledge current.

In terms of affecting knowledge creation, these journals provide an opportunity for writers and readers, among other things, to identify trends in how LIS services are, and should be, provided and managed. They help local LIS professionals and students to see how programmes (for example, pertaining to staff training or employee motivation) and systems (such as CD/ISIS) have been implemented in different situations and locations, and to understand who is using different information resources and how they are being used. That is to say, these journals are offering their readers access, in the words of Davenport and Prusak (1997), "to framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information." They are providing the readers with access to the social knowledge created by their peers, social knowledge that is related to familiar organisations and is in contexts to which the readers can relate. The fact that members of the Australasian LIS community can relate on both a professional and personal level to the content and contexts of the papers in these journals is, if we are to believe the business gurus, essential for knowledge creation and innovation in their organisations.

For knowledge creation to occur in LIS in Australasia as elsewhere, LIS professionals must be taught as students to read their professional literature and to evaluate and incorporate the pertinent components of this, their profession's social knowledge, into their own new experience and information. From this incorporation, new personal knowledge will continue to be created by LIS information professionals. This personal knowledge is the well-spring for future papers to be published, and social knowledge to be conveyed, in the Australasian LIS journals.

Nonetheless, of the 11 LIS journals examined for this paper, only five remain in print, four of which come from Australia and one from New Zealand. With the demise of 6 of the 11 professional journals examined, including those from Southeast Asia and Fiji, there is a decreasing chance for LIS journals to assist in LIS knowledge creation in Australasia's developing nations.[7] It is important for the librarians in the Southeast Asia and Oceania nations to have their own voice to discuss and to read about their own practices. There is hope, at least at the newsletter level, that the Internet may be helping their voice to grow stronger. Many of the poorest of the nations, however, do not have the telecommunications infrastructure or the information technology for members of the LIS community to benefit from the Internet as a means of communication.

A final point to bear in mind is that the Australasian LIS journals are not the primary outlets that LIS academics and professionals use to communicate their research results to a world-wide audience. This is especially true when these individuals are seeking academic or professional promotion that is tied to their publication record. In these circumstances, Australasian writers will aim to publish their papers in the mainstream American and British LIS journals.

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[7] Note that the *Malaysian Journal of Library and Information Science*, which was not examined in this research, is still an active publication.

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LIS Journals in the knowledge age

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Abstract:

Examines EMERALD LIS and how it facilitates the use of information contained in LIS journals for improvements and progress. In particular, how EMERALD LIS journals are connected to each other and the wider literature electronically (both LIS and other disciplines); and their content structured, organised and made accessible for knowledge-based retrieval.

Introduction

Journals are a communication mechanism. Their content reports on the research, experimentation and implementation which contributes to knowledge. This paper outlines how one LIS journal publisher is contributing to the knowledge age through the content mix, structure and dissemination of its publications.

EMERALD LIS
Is a full text database of journals which fall into 4 main categories:

Information management
- Campus-wide Information Systems
- Information Management & Computer Security
- Information Technology & People
- Industrial Management & Data Systems
- Internet Research
- Journal of Intellectual Capital
- Journal of Knowledge Management

- OCLC Systems & Services
- Online Information Review

Library technology
- Library Hi-Tech
- Library Hi-Tech News
- New Library World
- OCLC Systems & Services
- The Electronic Library
- Online Information Review
- Campus-wide Information Systems
- Electronic Resources Reviews (archive only)
- Information Management & Computer Security
- Information Technology & People
- Internet Research

Library and information service management
- Library Management
- The Bottom Line: Managing Library Finances
- Library Review
- Reference Services Review
- New Library World
- Asian Libraries (archive only)
- Librarian Career development (archive only)
- Library Consortium Management: An International Journal (archive only)

Collection management/development
- Collection Building
- Interlending & Document Supply
- Reference Reviews
- Reference Services Review
- Online Information Review
- Electronic resources reviews (archive only)
- The International Journal on Grey Literature (archive only)

Content mix

EMERALD LIS journals comprise a mix of the following types of articles in both HTML and PDF format:
- Wholly theoretical
- Theoretical with worked example
- Theoretical with application in practice
- Literature review
- Case study
- Journalistic
- Comparative/evaluation
- Technical
- Survey

An archive of the articles' abstracts from 1989 to date; and full text from 1994 to date is included.

Secondary material in HTML format:
- Reviews of books
- Reviews of electronic resources
- Reviews of articles published in the journals of other publishers
- Abstracts of articles from other publishers' journals.
- Abstracts of research in progress

And current awareness:
- News
- Conference reports
- Features
- Opinion and commentary
- Interviews

Structure

EMERALD LIS is a database which designed to be searchable, browseable, connected to and from the publisher's content in other disciplines; and the content of other full text and secondary publishers via CrossRef. Searching and browsing may be subscription permitting, or regardless of subscription.

Search

EMERALD has a quick and advanced search facility. Quick searching can be by:
- Journal title
- Keyword
- Article title
- Author name
- Full text

Search is fully Boolean and wild cards may be used. The advanced facility incorporates the following refinements:
- Search limited by EMERALD content indicator – i.e. stated implications for research or practice; stated originality of argument or concept; or general readability and accessibility to the non-specialist
- Search limited by article type – i.e. classification as wholly theoretical, survey, technical etc.

A saved search option allows users to retrieve, edit and re-run previous search terms within a user profile.

Browse

Is possible by:
- EMERALD subject area (e.g. library and information services, information management, or some other discipline)
- Journal title
- Keyword
- Article title
- Author name
- Library of Congress classification.

Knowledge- based Retrieval

Results can be ordered by:
- relevancy (number of occurrences of the search words in the results; and rarity of the search terms);

- newest first or by oldest first.

Connections

The LIS journals of EMERALD link to and from each other (see Figure 1); and to and from the articles, abstracts and reviews of the publisher's journals in other subject areas (see Figure 2). These other subject areas are:

- Accounting, auditing and economics
- Continuing professional development
- Education
- Engineering and materials science
- Environmental management
- Food and nutrition
- General management
- Healthcare management
- Hospitality and services management
- HR management
- Logistics and supply chain management
- Marketing
- Operations and production management
- Police management
- Public sector management
- Quality management
- The built environment
- Training

They also connect with the abstracts and full text of other electronic publishers via EMERALD "key readings" and reference linking (see Figures 3 and 4).

Dissemination

The LIS journals of EMERALD are accessible to the community of interest in a number of ways.

Direct subscription

Organisations can make a standalone subscription to the database, or they can subscribe via a consortium. Subscription can be for one year only, or for multi-years. Consortia which are already signed up are:

USA and Canada
- AMIGOS
- BCR
- CAPCON/CIRLA
- CIC
- CREPUQ
- CSU
- NELINET
- OCUL
- OHIOLINK
- SOLINET AND PALINET
- UNAM

Europe
- BIBSAM of Sweden
- CBUC of Spain
- FINELIB of Finland
- HEAL of Greece
- SPOC of Spain and Portugal
- UKB of the Netherlands

South Africa
- ADAMASTOR
- GAELIC and FRELICO

Rest of world
- A Korean open consortium of 76 institutions
- MALMAD in Israel

Subscribing organisations can access the content of EMERALD by connecting their networks to the database direct for full functionality and content mix; or they can access via one of the agent gateways to e-journals which has an agreement with EMERALD:
- SwetsBlackwell's Swetnet*Navigator*
- EBSCOOnline
- OCLC's ECO

These interfaces offer only simple search and retrieval of articles only – none of the advanced search and retrieval features of EMERALD are possible via a common interface. Nor is the rich content mix of the journals which comprise EMERALD, and the subject area connections with articles, abstracts and reviews of other disciplines. However, they do offer the advantage of fulltext search and retrieval across publishers.

The EMERALD network licence is very liberal, and complies with ICOLC guidelines. Notable features are that it includes provision for:

- Continued access to the licenced material which was published during the subscription period, after termination of the licence for reasons other than cause or breach
- Printing and copying of single copies of parts of licenced materials for authorised use, e.g for use in non-commercial course packs or electronic reserves
- Supply of single copies to other libraries for the purposes of non-commercial research or private study
- Agreements to cover access for distance learners and users outside the country of the consortium membership
- Agreements to cover local hosting of data

Subscription to a database which is linked to EMERALD

At the time of writing, EMERALD has agreements with:
- Fulltext database aggregators, e.g. EBSCOHost, IngentaJournals Online
- Bibliographic databases, e.g. HUBER E-JOURNALS, MEOS, InformationQuest, SilverLinker

Pay per view

The EMERALD shopping basket facility allows users to select articles, reviews and abstracts; and then pay per view.

LibraryLINK

Content from the library and information journals of EMERALD is also available to the community of interest via the free information service its publisher provides to librarians and information professionals – LibraryLINK.

LibraryLINK is an online service, updated monthly, which provides the following:

- Commentary and opinion from a dedicated editorial team on the current issues affecting librarians and information professionals. Where appropriate, links are made to the full text of key EMERALD articles on the subject.
- News
- A conference diary
- Details of publishing opportunities (via books, journals, and conferences)
- Announcements of new professional books and journals
- Reviews of professional books and journals
- Recommendations to Web sites
- A discussion area
- The opportunity to input into the product and service development of EMERALD via participation in annual workshops during IFLA and ALA Midwinter.

Conclusion

How LIS journals are structured, made available and accessible to their community of interest can affect the contribution research and development makes to knowledge. As one of the major communication mechanisms, journals need to contain a mix of types of content . That content needs to interrelate with the record of other work carried out in the field and in other disciplines. How journal content is viewed should be able to be personalised to the needs of the information user.

In doing all these things, EMERALD facilitates the translation of LIS information into knowledge.

CAPTIONS

(Not available electronically – please contact the author)

Figure 1. Example of search and retrieval of articles, reviews and abstracts across the range of EMERALD library and information journals.

Figure 2. Example of search and retrieval of articles, reviews and abstracts across disciplines

Figure 3a. Abstract of an EMERALD article retrieved, showing the link icon to "Key readings" – abstracts of articles by other publishers on the subject

Figure 3b. Listing of the articles by other publishers on the subject

Figure 4a. EMERALD makes links to the wider literature cited in its articles via "active reference links"

Figure 4b. Sources for obtaining copies of works cited in EMERALD articles

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Reading research: an international perspective

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I should like to thank the Reading section of IFLA, and specifically John Cole of the US Library of Congress, for inviting me to give this paper, and Alida Cutts of the International Reading Association for having recommended me to John Cole as a suitable person for the task.

Reading is probably the most researched aspect of education. It has recently been estimated that 100,000 research studies on reading were published in English alone in the period 1966-99, with at least 15,000 before 1966 (National Reading Panel, 1999). In this paper I can therefore only state some main trends and categories and give a few highlights.

The main aim of reading research is to ensure that as many people as possible can read to their full potential, and have their lives enriched through their reading. In the pursuit of that aim, **libraries have a key role and value:** 'A good public library service can make a unique contribution to reading. Book lending is still perceived to be the major function of the public library, and libraries are seen as natural places for those who want to develop as readers' (Toyne and Usherwood, 2001).

Two major concerns of librarians everywhere are who their readers are, and what texts they read - roughly speaking, the sociology of reading - and in several countries of former eastern Europe (e.g. Croatia, Estonia, Hungary, Poland) the national reading or literacy associations have strong representation from, indeed in some cases were founded by, staff of the national libraries with just these concerns. However, I need not expand on those concerns to an audience of librarians.

An aspect of what might be called the linguistics of reading focuses on the question: **Texts – what are they like?** This topic has been especially influenced by genre theory, as developed particularly in Australia. And there are various research groups which specialise in the analysis of textbooks, for example Paradigm in the UK, and Internationale Schulbuchforschung/International Textbook Research, which has its base in Germany.

Within the psychology of reading, I have space merely to note that a vast amount of work has been done on the cognitive processes underlying reading, and then to mention that another rich research vein in this area is **attitudes to reading**: What do readers like/not like reading? What are their reading preferences and habits? Large-scale studies of school students' attitudes to reading and reading habits were carried out in the mid-1990s in England and Portugal. A rather depressing finding came out of a separate study in England and Wales in 1995: about 25 per cent of 8-year-olds were already turned off reading, and the average score of that group on a reading test was significantly lower than their peers' (Brooks *et al.*, 1997). Of course, this is a chicken-and-egg situation: were they failing in reading because they didn't enjoy it, or did they not enjoy it because they were not good at it? The answer is probably a vicious cycle of underachievement and rejection.

I turn now to several topics within the pedagogy of reading. One aspect of particular relevance to librarians is the exponential growth of **new media** and the reading that they entail. Here, although not nearly enough research has yet been done, a consistent finding appears to be that computers do not substitute for teachers or librarians: learners still have to be tutored in how to make best use of the new sources of information, as they had to with the old.

The major question within the pedagogy of reading is **How is reading taught?** Within that very broad area, the greatest focus of interest for many years, especially in North America, has been on initial instruction, and on 'code emphasis' (roughly, approaches within which phonological aspects are stressed, the best-known being phonics) versus 'meaning emphasis' (roughly, approaches within which meaningful encounters with text are most valued; parents sharing books with their children would be a familiar example). The report *Teaching Children to Read* (National Reading Panel, 1999), to which I have already alluded, is the most recent and comprehensive analysis of the research in this area. It reaches two key conclusions, among others:

- phonological/phonemic awareness (the ability to identify, segment and manipulate sounds within words) is crucial to almost all children in learning to read and write;

- systematic, explicit teaching of phonics gives the best results in early instruction, provided it is embedded in a programme which also emphasises meaningful encounters with text.

Some crucial research leading to the conclusions about phonological awareness have been carried out in Australia by Byrne and Fielding-Barnsley (Byrne, 1998).

A pedagogical area that is attracting increasing interest is the relationship between **preschool experience and early literacy development.** A few of the relevant studies are:

- in England: the Effective Provision of Preschool Education (EPPE) project which studied about 3,000 children from age 3 to age 7. It established that attendance at a good-quality preschool (nursery, kindergarten, playgroup) was influential in boosting children's early literacy at ages 5 and 7, even when pre-existing differences such as socio-economic status were allowed for;

- in Malta: the first national survey of literacy attainment in that country (Mifsud *et al.*, 2000), carried out in 1999, studied 6-year-olds, who in that system are in their second year of compulsory schooling. This survey produced a very similar finding to the EPPE study;

- in Sweden: a longitudinal study of 2,500 children tested at age 3-4 and now in grades 2-3 is finding much the same thing;

- in Norway: Bente Hagtvet has been researching the relationship between emotional development and literacy, and establishing that early trauma impedes learning, but that enabling children to cope undoes the damage.

Another pedagogical area that is attracting increasing interest is **adult literacy**, whether in learners' first language - there are research and development projects under way on this in England (see Brooks et al., 2001a, b), Ireland, Scotland, Slovenia and the USA - or their second language - again there are research and development projects under way on this in England, Sweden and the USA.

In at least two important countries there is **increasing attention to reading in second languages more generally.** In Russia, there is an Institute in Moscow entirely devoted to this topic, and in the USA the International Reading Assocation (though it is broadening the topic out internationally) has made second language literacy its current research focus. The IRA has embarked on a series of meetings and initiatives on this topic which will culminate at the 19th World Congress on Reading in Edinburgh in July 2002.

Within the pedagogy of reading, another key topic is remediation, or **How can struggling readers be helped?** Several countries have researched this question and concluded that screening and early intervention are essential if struggling readers are to be given effective help. Screening and early intervention are provided nationally at age 6 in New Zealand (in the form of the world-renowned Reading Recovery intervention programme) and in Iceland, and in grade 2 in Norway. In England a recent research review of this topic, using only UK research, resulted in the report *What Works for Slow Readers?* (Brooks *et al.*, 1998). One of its key findings was that leaving struggling readers alone to catch up (perhaps on the mistaken assumption that they are 'late developers') is useless - they just get further behind - thus reinforcing the case for early intervention.

I return finally to another aspect of the sociology of reading, namely **How well can people read?** Many countries have long-established curricula, or 'standards' in the sense of criteria by which to judge achievement, which attempt to ensure that teaching has a clear aim; others have developed such instruments in recent years, for example Russia, Ukraine and the UK.

In the other meaning of 'standards', namely levels of achievement, there are many examples of initiatives which have the aim of raising standards. Almost certainly the largest of these is the National Literacy Strategy in England. This has the aim of raising levels of attainment in reading and writing in all the public-sector schools in the country with students in Years 1-9 (kindergarten to grade 8). In principle, this initiative is targeted at all 20,000 primary and 5,000 secondary schools in the country, and therefore at a total student body numbering 5.5 million. A strong research programme evaluating the initiative is being conducted by the Ontario Institute for Studies in Education in Toronto, Canada.

Many countries also take a research interest in monitoring standards of achievement in reading and writing over time. Pre-eminent in this regard are the various series of **international surveys:**

- PISA (Programme for International Student Assessment), under the aegis of OECD, carried out its first survey, of students aged 15, in 2000, and is planning a series of surveys at 3-year intervals, all to contain a reading element though not always as the principal focus;

- PIRLS (Progress in International Reading Literacy Study), overseen by IEA, the International Association for the Evaluation of Educational Achievement, is conducting a survey of 9-year-olds this year, 2001;

- ALL (Adult Literacy and Life Skills Survey), again under the aegis of OECD, is planning a survey of adults aged 16-64 to take place in 2002.

The results of all three international studies are keenly awaited.

Some countries opt instead for **annual national testing** of students' achievements:

- in England and Wales, for students aged 7, 11 and 14
- in Estonia, in grades 3 and 6
- in Israel, in both Hebrew & Arabic in grades 1, 4 and 6
- in Malta, in both Maltese and English in Year 6 (age 11).

A further option chosen by some countries is **monitoring systems**, that is, regular surveys of representative samples of students of particular ages, again intended to detect changes over time: the USA (in the form of the National Assessment of Educational Progress, NAEP), Hungary, Scotland and France all have such systems.

Within all these systems of teaching and assessment it is possible to detect a constantly **widening concept of literacy:**

- it is no longer considered sufficient to concentrate solely or even heavily on narrative fiction - literacy must also encompass non-fiction and non-continuous texts (where non-continuous texts are, for example, graphs, tables, and lists of all kinds);

- literacy is no longer concerned just with word recognition, and with comprehension as information-retrieval;

- it is also, and strongly, concerned with inference, reader response, knowledge of text types, values and attitudes, and understanding of the writer's craft.

All of this represents an ever greater challenge to all who love reading and seek to nurture it, in the name of greater understanding and enjoyment.

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Can Reading Research in Africa be done in isolation? The influence of Literacy, Education, Publishing and the Book Industry on Reading in Africa

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The phrases `ours is not a reading culture' and `African Society is an oral society' are often used in discussions of literacy, of publishing, of education levels, of book publishing and bookselling and of availability of reading material in Africa. The discussions often center around the vicious circle that afflicts African reading, writing and book industry i.e no reading material; therefore no reading culture; therefore no market for reading matter; therefore no publishing and therefore no reading material and therefore no reading culture – this, like any circle could be started at any point of the circle. The lack of a reading culture is indeed true and affects social and economic development of many communities in Africa. However, for most parts of the continent, what is lacking is empirical data on reading and reading habits. Much of what is being said is based on assumptions. Most of the research that reveals anything on reading is inevitably often part of a larger study of related fields such as literacy, publishing, book promotion and book policy. The general trend is that reading itself as a main area for research and covering its different aspects seems to be rarely done, if at all. This in itself may not be necessarily bad and perhaps the question that needs to be asked here is how the research that is done can be expanded and be of benefit and lead to reading promotion and sustainability of a reading culture.

This presentation, which concentrates on East Africa, but which is applicable to many other parts of Africa, attempts to point out that reading research is so intertwined with research on literacy, especially adult literacy; on book publishing and distribution; on book affordability and availability; on language policy etc, that it would indeed be unwise to do research on it without linking it to other related fields. It is also argued that in order to draw up a workable plan to improve on the reading environment in Africa, the basis of these plans must be based on accurate information. Any research should therefore be comprehensive and cover all the different issues that influence and affect reading and the reading culture.

Reading research as part of research on Literacy

The average literacy rate for Sub-Saharan Africa is 59.6%. This is according to the human development index of 2001. Many countries have carried out mass adukt literacy campaigns in an attempt to improve their people's ability to access government social programmes. The evaluation/research/studies that are necessary to gauge the success of such campaigns, inevitably always include a section on what use the literacy programme graduates have made of their newly-acquired skills. A recent evaluation of the Functional literacy Programmes in Uganda included in its study, questions about the use of newly-acquired reading and writing skills. It asked respondents what type of material they read and whether they used libraries or simply read home reading like newspapers. In a somewhat related development, the forthcoming Pan-African conference on Reading to be held in Abuja, Nigeria, in October this year, has as its main theme **'Reading for all,: Building communities where literacy thrives'** . Whether in research, planning or general discussions, the effect that literacy has on the reading habit in Africa and many other parts of the world can never be taken for granted, and reading therefore always forms part of any research on literacy.

Publishing and availability of Reading material

The African Publishers Network (APNET), an organization that unites publishers across Africa and whosee vision is 'the transformation of African Peoples through access to books' was founded in 1992 and has during its existence carried out several studies on the publishing and book industry in Africa. In one such study carried out in 1998 in various countries of Eastern and Southern Africa, the issue of a reading culture among Africans was discussed at length with those interviewed and the study concluded that it is difficult for the publishing industry to grow where the culture of reading is almost non-existent. Closely linked with publishing is the availability of suitable reading material to the people. In many of their discussion, publishers have acknowledged that suitable reading material must be made available to the general population, if the culture of reading is to be developed and nurtured.

The Book Development Trusts of Kenya, Uganda and Tanzania, organizations concerned with the development of the book trade has indicated that they hope to carry out research on the reading habit in East Africa, whose results, it is hoped will assist them shape the future of their industry.

The School Curriculum and the home environment

Recent studies on curriculum development have also included the question of reading as an activity for students and how the general physical facilities at home and the attitudes of parents affect children's future reading. The emphasis on passing exams in many countries means that children end up regarding reading as a chore rather than an enjoyable activity. A 1997 UNESCO Research Project on improving reading skills in Primary schools in Uganda examined how the home environment affects the reading capabilities of children in primary schools. The findings revealed that attitudes of parents affected children's reading and that children from homes where parents were literate were more likely to enjoy reading and to be encouraged to read than in homes where parents were illiterate. In addition to that in some discussions and studies, the language used as a medium of instruction especially in primary schools and the availability of further reading material in the local language has also been identified as having a big influence on students' future interest in reading.

In most of the examples given above, research on reading forms part of a study of something else related to reading and as a result not all that would be useful to know about the reading habits of a group of people, a society, a nation are ever brought together. In literacy, for example, studies mostly concentrate on reading by adults. Even then, it is usually on adults who have acquired literacy in adulthood. They rarely take into consideration adults who have gone through formal education, are highly literate, can afford to buy reading matter and perhaps most importantly can also influence their children and other adults into reading. In publishing and the book industry, the emphasis is on getting a market for the industry's product. Studies would therefore be on who reads what is available, rather than what to produce for the clientele. It would be interesting to know exactly how big a market there is for books written in local languages, and whether their publication are likely to contribute to the eventual build up of a big local market.

On the school curriculum, studies are concentrated on reading b young people. What they would like to read after leaving formal education could also form part of a general study on reading.

Although conclusions are drawn at different times about the different aspects of reading, the combined efforts of all those who could make a change (Libraians, teachers, publishers, parents, booksellers, community leaders) have not been mobilised. A 1993 study of different aspects of the book trade in East Africa, recommended that a wider research be carried out on all issues that affect the book trade. On reading, it was suggested that facts and figures on the following be obtained:

- Estimated reading population.
- Number and regional distribution of literacy and post-literacy centers.
- Financial resources assigned for setting up literacy and post-literacy centers.
- Financial resources allocated for reading promotion.

To this could be added

1. Literacy and how it affects one's ability and desire to read.
2. The number of titles available on the market and what languages they are written in.
3. The effect of the cost of paper and government taxes on publishers' ability to publish.
4. The potential market of titles in local languages especially those languages that cross national borders.
5. The influence of the curriculum and the home environment on children's reading.

Conclusion

Research carried out in any discipline is not an end in itself, but as a means of finding a way towards the betterment of society. As governments in Africa attempt to better the lives of their people through improved health, nutrition, education and other programmes and through better access to information, the issue of ensuring that people do read and retain the habit of reading throughout their lives, cannot be ignored, To date the key players in this have been attempting to solve the problem from different angles. Perhaps it is time that concrete data on all forces at play were brought together so that a coordinated approach is used to ensure that Africans and their children and their children's children read and continue reading.

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Reading research in the UK

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Abstract

This brief paper summarises current key trends in current reading research in the UK. It focuses on two areas in particular – literacy and reader development, and provides examples of ongoing research in both fields. Recent literacy-based research has been influenced by the implementation of the Government's National Literacy Strategy, and by subsequent initiatives such as the National Year of Reading and the National Reading Campaign. Reader development activity has grown significantly in recent years, to the extent that the Government has allocated two years of funding specifically to projects in this area, and widespread research is ongoing to investigate the outcome of these projects. The paper concludes with a brief examination of research methodologies, and of a possible increased recognition of the efficacy of qualitative data to demonstrate the value and impact of reading.

During the previous decade, a number of major changes occurred in British thinking about the teaching and development of reading and writing. The themes most widely debated that predominated research during this period were:

- teaching methods in reading
- family literacy
- the role of the new technologies in reading.

In the United Kingdom today, there appear to be two major strands of research within the area of reading: literacy and reader development. The significant growth of these two areas has taken place as a direct consequence of recent government initiatives. A large proportion of government funds has been allocated both to raising literacy standards in schools, via the implementation of the National Literacy Strategy[i], and to promoting reading as a leisure activity, via the Public Libraries Challenge Fund.[ii]

Literacy

The National Literacy Strategy was implemented in England and Wales in 1998, a key focus of the Government's drive to raise literacy and numeracy standards in schools.

An element of this strategy is the Literacy Hour, which was introduced into primary schools (for children aged 4-11 years) in September 1998. Each school is required to spend a minimum of one hour per day with the following specific, sequenced structure:

- 15 minutes of whole-class text level work
- 15 minutes of word level work and word and sentence work
- 20 minutes of group and independent work
- 10 minutes of whole-class reviewing and consolidating.

Research is ongoing in this area in order to investigate the impact of the strategy on teachers' thinking and classroom practice. For example, the universities of Durham and Newcastle are working on a joint project entitled 'Whole class teaching in the literacy and numeracy hours'[iii], which aims to highlight examples of good practice currently being used in whole-class settings in order to support future policy initiatives, teacher training and research.

This year's International Conference of the United Kingdom Reading Association (UKRA[iv]), held in July, was entitled 'Just let me think', and focused on language learning and literacy. This is a further example of a means by which good practice can be shared, as the conference highlighted many examples of current research investigating teaching, creativity and imagination in literacy learning and teaching.

In 1998, the National Year of Reading (September 1998-August 1999) began, a key aim of which was to raise the reading standards of both adults and young people, by involving the whole of society in a wide-ranging campaign to encourage and promote reading. The former Government Department for Education and Employment (now the Department for Education and Skills[v]) contracted the National Literacy Trust to coordinate the National Year of Reading on its behalf.[vi]

Over the year, £800,000 (over $1,000,000) was provided by the National Year of Reading to fund 86 local and national projects, and the impact of the programme was monitored and reported in the National Literacy Trust report 'Building a nation of readers,'[vii] and in the Library and Information Commission research report 'Rediscovering reading: public libraries and the National Year of Reading.'[viii]

In addition, the Trust hosts a number of conferences, for teachers, practitioners and policy makers. Its annual conference is held in November, and in 2000 focused on the 'Early years: building the foundations for literacy', and will this year discuss the arts and literacy.

The Government offered a degree of support to the National Literacy Trust in developing the continuation of the National Year of Reading, the National Reading Campaign (NRC). The NRC acts as a channel through which details of successful initiatives throughout the UK are disseminated, with the eventual aim of achieving long-term, sustainable change.

Information concerning current literacy research, publications and resources is available in the Literacy Trust's quarterly magazine, 'Literacy Today.'[ix] More comprehensive information about ongoing and completed literacy-based research in the UK is available on the National Literacy Trust website[x], to which researchers are also invited to submit their own research outlines.

Reader development

Reader development, with adult readers in particular, has experienced a dramatic growth in recent years, yet definitions of the term are sometimes unclear. Reader development is often confused with reading development, but the two are very different. Whereas reading development focuses on the acquisition of reading skills, reader development focuses on the reading experience itself. Van Riel[xi] (1998) defines the term as:

> '...[an] active intervention to open up reading choices, increase readers' enjoyment and offer opportunities for people to share their reading experiences.'

The increase in reader development activity means that public library authorities throughout the United Kingdom are now involved in a wide range of project-based promotional events and programmes. Arguably the most significant of these to date is **Branching Out**, a three-year English initiative (1998-2001) from the Society of Chief Librarians, funded by the Arts Council of England. 33 local authorities plus the National Library for the Blind have been selected to take part in specially devised training to enable public librarians to develop new methods of involving adult readers in contemporary literature. A key objective of the project is to raise the status of reader development within and beyond all 150 English library authorities through a series of regional networks. The University of Central England (UCE) is conducting the evaluation of Branching Out, which focuses both on the impact on the readers, but more significantly on the participating librarians.

Evaluative methods have included:
- Learning reviews – qualitative surveys that enable participants to monitor their personal and professional development throughout the project; and
- reader development skills audits – conducted at initial and final stages in order to monitor skills development.

Formative research findings have been reported on the project website[xii] and via a number of publications in the professional press (see website for further details). A final research summary will be produced as the project ends in September 2001, and will be available for distribution to all UK public library authorities and other interested parties.

Over the last two years, the growth of reader development activity has become sufficiently widespread that the Government, via its Department of Culture, Media and Sport (DCMS), has allocated two years of its Public Libraries Challenge Fund (2000-01, 2001-02) specifically to reader development projects[xiii]. The projects are targeted at both adults and young people, and many aim to reach socially excluded groups. All work is monitored by external evaluators, and research into the overall impact of the programme is being conducted by academic departments.

Details of the projects evaluated by the University of Central England are available on our website,[xiv] and details of all projects are listed on the DCMS site.[xv] The results of the 2001-2002 round of funding were released at the end of July 2001, although at that time full details of successfully funded projects were not yet generally available on the DCMS website. However, one example of a project that will commence in Autumn 2001 is 'Caring with books', a project involving a consortium of 10 library authorities across the West Midlands region in England, which aims to bring public libraries and reading to children in public care, to their carers and foster families. The University of Central England will conduct the evaluation of this important reading project.

Research methodologies

Both of these key areas of current reading research result in the collection of qualitative data. This is inevitable, as when investigating the value of reading it is critical that people's experiences and perceptions are used to measure the impact. However, it has generally been the case that policy makers placed a greater reliance on quantitative as opposed to qualitative data, but there may be indications that they are now more willing to use qualitative data in order to inform political decisions.

Research conducted for programmes such as the National Year of Reading and Branching Out has provided many data with which to link reading to key initiatives on the government agenda, such as lifelong learning and social inclusion.

Qualitative techniques used to collect these data would require further promotion in order to make explicit to policy makers the value and impact of reading.

Notes

[i] National Literacy Strategy details: http://www.standards.dfes.gov.uk/literacy/

[ii] UK Government Department for Culture, Media and Sport (DCMS) website, with details of the DCMS/Wolfson Public Libraries Challenge Fund: http://www.culture.gov.uk/heritage/index.html

[iii] Project title: Whole class teaching in the literacy and numeracy hours.
Research teams: Durham and Newcastle Universities
Sponsors: Economic and Social Research Council [http://www.esrc.ac.uk/]
Duration: 2001-2002.

[iv] United Kingdom Reading Association website: http://www.ukra.org/

[v] The Department for Education and Skills (DfES) website: http://www.dfes.gov.uk/index.htm

[vi] The National Literacy Trust, an independent charity 'dedicated to building a literate nation.' Citation from the National Literacy Trust website: http://www.literacytrust.org.uk

[vii] National Literacy Trust (2000) Building a nation of readers: a review of the National Year of Reading. National Literacy Trust for the Department for Education and Employment.

[viii] Streatfield, David, Tibbitts, Dianne, Jefferies, Greg, Downing, Richard and Swan, Ray (2000) Rediscovering reading: public libraries and the National Year of Reading. Information Management Associates for the Library and Information Commission. Library and Information Commission Research Report 30.

[ix] 'Literacy today': http://www.literacytrust.org.uk/pubs/literacytoday.html [Includes subscription details and sample articles to download]

[x] National Literacy Trust – details of current research projects: http://www.literacytrust.org.uk/Research/ongoing.html

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[xi] Van Riel, R. (1998), *Creating the readership for literature in translation*, presentation to international conference at University of East Anglia, British Centre for Literary Translation.

[xii] The Branching Out project website: http://www.branching-out.net

[xiii] A complete list of 2000-2001 projects and contact details for the DCMS Reader Development Programme is available at: http://www.peoplesnetwork.gov.uk/dcms-wolfson.html

[xiv] Details of current projects conducted by the Centre for Information Research, University of Central England in Birmingham, UK: http://www.cie.uce.ac.uk/cirt/current.htm

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Reading research in Sweden - a short survey

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The library, deeply involved in a democratic process, where reading and reading promotion can serve as a springbroad, has been an important institution for Swedish reading research. In the early twentieth century young people, fighting for right to learn and for social equality, created their own libraries. These popular movements are goals for reading research. And today reading researchers want to know how libraries buy, promote, disperse and borrow literature – not all of them but many.

I would like to start this short survey about Swedish reading research with some figures recently published by the national Council for Cultural Affaires (statens kulturråd). There is a study carried out by the National Statistics Office of Sweden. The goal was to get an image of the cultural habits of the population.

A sample of persons from 9 to 79 years of age was chosen. This sample covered the entire country. In this study, published under the name of Cultural Barometer 2000 (Kulturbarometern 2000), one of the findings is that book reading and library visits are the main cultural occupations of the Swedish people.

- More than 80 percent have read a book for pleasure at least once a year.
- During the year 2000 about 70 percent in the ages mentioned above visited a library.
- In all parts of the country working class people and employees mainly go to public libraries.
- Women in Sweden read more than men, highly educated people more than less educated.
- People read more in big cities than in the country as a whole.
- Reading among elder people has increased.

This type of "official" research on cultural habits and reading is done every 5th year in Sweden as required by the National Council for Cultural Affaires, who also – among other thing – has to handle the state financial support for dispersing of literature.

Popular movements a hundred years ago

The interest for research on reading has deep roots in the Swedish society. It goes back at least to reading habits in the popular movements a hundred years ago. The university institution that especially publishes doctoral studies on Sociology of Literature is the Section for the Sociology of literature at the university of Uppsala. Since the middle of the sixties this institution in Uppsala has chosen to work with reading research deeply connected with social movements.

The founder of this well-known institution is professor Lars Furuland, now emeritus, but followed by a worthy successor, professor Johan Svedjedal, also once educated as a librarian – and now in the forefront of world research about how the web is used for literary publishing and print on demand.

My aim here is to show a sort of red line from the beginning of the century 1900 until now in Swedish literary policy and reading research. Examples of this type of research will here simply be given by mentioning some dissertations. Others could also have been mentioned as examples of research about how reading was used for education, pleasure, solidarity and a longing to change the society.

One dissertation chosen from the Uppsala literary sociologists shows the obvious desire in the early Swedish popular movement to use reading as an instrument to reach equality with the middle class or the bourgeios society around. Here in this aim to get equality – both in cultural habits and reading needs – you also find the embryo to the cultural policy called *literary policy*, extending all over the country, that will be more and more discussed and profiled as a main Swedish political goal from the late Sixties.

The dissertation written by Kerstin Rydbeck, called *Sober Reading. The Swedish Good Templar movement and literature 1896 – 1925*, analyses reading habits and specific reading methods inside the temperance movement, such as reading as a sort of political act. The reading and discussion in group gave language ressources and selfconfidence enough to participate in a social debate but also this thirst for learning.

But there also already at this time seems to be a lot of reading for pleasure and for personal development. The result shows that the indivuals in this early temperance movement not only chose titles about good drinking habits – but also "normal" bourgeois classics. Among the international authors read I notice such writers as Bertha von Suttner and Leo Tolstoi..
The ambitious dissertation also – in line with the methods of the institution at Uppsala university - covers reading habits about press, temperance movement reviews and editors. As in other Swedish social movements where the work was done in study circles – there is a rich access to protocols, lists of members and learning activities – which gives a diversified and detailed image of the importance of people's reading about a hundred years ago.
This also gives the embryo to what you can call a big *adult education movement*, where reading in group with others creates new and broader perspectives for the individual.

Lars Furuland has chosen the expression " mediated reading" for this type of reading in glaring contrast to more superficial or browsing reading. As he also points out – the costs of energy – was one essential factor putting obstacles to reading. More than a hundered years ago, lighting up while reading was luxurious and only for the elite in the society. Readers without economical resources only had daylight or candles as sources of light. Therefore it is seen as a sort of reading revolution when it became possible to read by oil lamps. Earlier I mentioned that the seed of an Swedish literary policy was already planted at the beginning of the twentieth century. People in Sweden learned, early and actively, to evaluate literature of a certain quality – and the fighting spirit in the circles gave them inspiration to make choices.

1910 – " dirty literature " from the United States

About 1910 there occured in Sweden the first outbreak of an active fight against what young socialists of that time call "dirty literature". This literature came from the United States, packed as comic strips. There was first of all Nick Carter – who was considered a risk to turn the heads of young workers. The Nick Carter booklets were sold at tobacconists- also new and challenging .

The fight against the Nick Carter booklets attempted to start young workers reading what later on will be mentioned *literature of value.* Professor Ulf Boëthius of the Stockholm university has written an essential thesis, which gives a better understanding of the reading aims in the broad mass of the people, including better cultural conditions on an equal level with the middle class. You can see later on in this paper that this early aim of equality will be significant during a hundred years fight for reading habits in Sweden.

Huge Investigation report on literature

As an embryo of an early reading policy in Sweden I can also mention as a "starting point" 1905, when there was the first financial support from the state to public libraries. But we have to wait until the late sixties before the Ministry of Education and Science ordered a huge research work, an investigation called Litteraturutredningen (Investigation report on literature) which resulted in thousands and thousands of pages – five separate volumes.The purpose of the whole study was- in the abstract bureaucratic language- to *suggest methods for consumption, distribution and production of literature in Sweden.* In reality the study is àmong other things a big mapping about book- and reading habits in Sweden. Here I will show only one small part of the report – written by professor Maj Klasson –for many years my colleague in Borås – but at that time researcher at the Lund university. Together with a colleague she made a research study about *all* public libraries in Sweden and their book acquisitions during a whole year – 1970. She made an analysis according to *target groups, subject field, book prices, editors.* Fiction value questions were important – and the researchers had to make their own quality scales. This study was ordered by the Ministry of Education and Science to get basic data from the whole country about how public libraries work with acquisitions.

Seventies – crises in the Swedish book market

During the seventies the Swedish book market changed dramatically. The fiction publications decreased and the book prices rose. The booksales fell. In this dramatic period the Swedish discussion tries to find fresh solutions for the reading dilemma. One part of the discussion turns to what is called a Norwegian model. In Norway at this time there was already a system where the state gives economic garantee to distribute fiction titles to the public libraries free. This system however was not chosen in Sweden in1970 – giving books to the public libraries without any costs to facilitate the desirable widespread quality reading. Instead Sweden goes the opposite way - introduces free prices on books – earlier bookselling was protected by special decisions. Now the book became an article among others, free for price concurrence. These decisions lead to a lot of fear an opposition.

There were protests against unregulated book prices. The editors feared for a concentration to big publishing houses – and death of small ones. The literary choice would diminish – and the Swedish National Librarian (head of the Royal Library in Stockholm) was afraid of cultural impoverishment. The enourmous agreement at this time on the book market led to new efforts: commercial quality bookclubs appeared – which could sell a novel for half of the normal bookstore price. This phenomenon was certainely not only Swedish. But five years later – in 1975 - the Swedish state offers a special financial support to the publication of different categories of "quality " fiction. This was a type of firebrigade activity from the Swedish state – which would be permanent – all in the aim to try to spread " quality" reading to as many people as possible. The Swedish libraries still had to buy all books – nothing was freely distribuated – but the costs became lower.

About five years later it was time for a new big investigation work, called Folkbiblioteksutredningen, the Public library investigation study. The governement employees researchers to make studies about different types of library work. Again the quality and dispersion of Fiction interests the Ministry of Education and Science. This time I myself was employed by the Ministry to work with a research study on 24 public libraries about Fiction acquisition and borrowing. The immediate reason for this was that journalists and authors for years had bombarded public libraries with accusations about the deteriorating quality of the fiction collections.

After years of work with quality categories about 3000 titles, where every title should have a reason for the category chosen, the investigation secretariat could give a lot of answers about how public libraries in Sweden handle adult fiction. All the material was statistically treated by specialists. The fiction categories were chosen to eliminate the risk that fiction as work of art was treated in terms of good or bad – therefore we chosed to categorise after how much each title was considered to be borrowed. For these considerations we also took help from experienced librarians. One of the most important findings was at that time that the public libraries do not give priority of acquisitions to popular entertainment literature – but that up to 75 percent of the circulating public library fiction material could be of this character. We could convincingly prove that the accusations against the public libraries for rapidly deteriorating the artistical quality of the collections were false. The results of the study got an important breakthrough in medias – and this type of accusations did not appear again.

Both these studies mentioned above – that by Maj Klasson and that by myself – I used later on for a thesis. As free studies ordered by the Ministry of Education and Science they both became essential as basic research to give results about public libraries way of handling fiction- important for the literature- and reading policy, which grew slowly in the Swedish society.

From the late sixties- with it´s roots 60 years earlier- a main idea is : "How to manage a dispersion of literature of value to as many individuals as possible ?". This means that the society with its libraries all over the country is expected to fight for equality in the access to fiction literature of value, no matter what the social background or economic resources are. But there are obstacles for this expected reading policy: the Swedish municipalities are free to do what they want with their libraries. They can prefer other main profiles than reading mediation.

As I show through my example in the beginning with the figures about reading in Sweden there is still a difference in reading habits according to education. Then you can assume that there still is a class difference in access to reading – despite a cultural policy where the governement has for many years given financial support to fiction.

The latest " reading research " ordered by the governement appeared in 1997 – with the title " Boken I Tiden " – a joke in the middle of the title who points out a new age: the book in the age of the web. This however – is not the most essential with this – small – most recent investigation, ordered by the Ministry of Culture – and the minister Marita Ulvskog from the social democratic party. As a result of this investigation Sweden got a library law – about this law I have spoken in the IFLA conference in Copenhagen 1997. It is now required that a municipality offer a public library to the citizens. In this new law reading and reading promotion is mentioned as one of the most essential library commissions.

And a bit amusing is that – after twentyfive years of hesitation- the Norwegian model with free copies of " literature of value" distributed to all Swedish public libraries now is chosen as main idea for giving a new form of state economic support to fiction promotion. There is a researcher, Erik Peurell, also with roots in the Uppsala group of sociologists of literature, who is working on a research material with evaluation about who public libaries have chosen to handle these free titles (titles without costs for the library), distributed to all public libraries. No money is distributed, only books.

Again the actor is the Swedish Cultural Council, which also works with a category classification of recent fiction books which could be chosen for distribution to the public libraries. Finally every chosen title is the subject of a battery of considerations.
The process is complicated – like many other complicated results only briefly mentioned here.

As a curiosity in relation to the latest events on reading research in Sweden I can mention that a new literary guru is a professor of the Commercial High School at Jönköping who uses reading as a method for getting his students educated and cultivated. He found that they were illiterate- and bad readers – and invites them to read 120 fiction titles during the studies for Master of Business Administration – while at the sam time most of the Swedish library educational programmes diminish fiction reading.

But not only a professor of a Commercial High School is worried about reading going down in Sweden.

Growing Reading Movement today

During the last years there is a growing Reading Movement (Läsrörelsen), supported by hundreds of organisations from public libraries, from the Swedish Royal Library to a lot of publishers, editors and popular education movements. Reading in Sweden is more and more a class distinctive. Among young people leaving the nineyear school there is 20 percent who haven´t knowledge enough to read or write well. This lack becomes a threat against democracy – despite the long tradition of a really education oriented reading policy.
This new reading movement effects thousands of actions to stimulate reading all over the country. But there is not yet done any research about this important work.

Actually it is once more professor Johan Svedjedal in Uppsala that effects the most interesting reading research. He now handles the pattern of change in the age of the web – with titles as The Literaty Web and The Last Book. Here I would like only to give a few glimpses from one chapter of "The last book". An idea mentioned and called a dream of libraries has always been to control all the information contents of books: to combine and chain so that books indeed are not really needed. Johan Svedjedal means, that this type of dream often is born in libraries which have to fight with an abundance of books. The Internet seems to give the possibilities to realise the dream. He is joking by talking about a situation where all book pages have been stored in an enormous textstrip – an with all readers of a block down on their knees reading the strip…. Will that situation appear in the future? No, that situation would probably not exist – and the paperbook would not disappear….

The technological revolution involves another risk. The possibility of digital home publishing gives on the contrary a danger for a sort of environmental disaster of the printing culture. It is easier to write, to publish, to sell .. to print your own book at home, to print on demand, to reprint old titles..

How will this situation influence reading policy? How will it influence reading research? These important questions have to be discussed over and over again – together with all the "old" questions on reading research and reading promotion. Therefore IFLA Reading section has decided in Boston, in August 2001, to go on with a programme on New Book Policy with examples from different coutries and with a workshop on Reading Promotion – in Glasgow 2002. In Berlin 2003 the theme of the sections programme will be The impact of Internet on reading.

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The Digital Divide: The view from Latin America and the Caribbean

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In sixties, when electronic resources had no appeared in the information markets, nor in the library services, users had only access to the documents and printed materials. The use of bibliographic materials should be made only in the library building, due to technology resources for remote access were nonexistent .

In those times, the difference between people with or without access to information, was based on the financial capability of the library for acquisition of its materials, on
the right or wrong way to organize the materials, and of course , on the policies of library services. The electronic resources did not mean big differences, because the use of them were reduced to reproduction of catalog cards, copy, and maybe some mechanical system of lending-borrow service.

With arriving of information technology, people taught that access to information would be easier, and would also promote a faster and efficient organization of library materials.

In that moment, a divergence between librarians and computer specialists rose, it was about the playing-roll of technology on librarianship. Computer specialists, spread out the idea that limits and restrictions that people had to access to the information would disappear, and then all people could use the materials easy and free, if library adopted the electronic version of those materials in paper.

Some enthusiastic experts got to express that libraries and books were "species in extinction" and electronic media will replace them.

The most relevant promoter of that idea was Willfrid Lancaster with his book *"The paperless society"* .

Perhaps, the most daring vision of what computers would be at the beginning of XXI century, is founded in the novel by Arthur C. Clarke, which was the basis of the Stanley Kubrik film "2001 Space Odessy", where a computer named HAL speaks by itself and is able to have feelings. This film shows a wide spread vision of middle sixties: trough one generation period, computers would be able to do almost everything that humans do.

Marvin Minsky said: " In few years we will have machines that can read Shakespeare, oil a car, tell jokes, and have fights in an office. (cited by Levy Steven " 2001:Why HAL Never happened" Newsweek special edition dec 200 feb 2001 p58).

Actually it never happened, in real, and scientists offered us an explanation for that, they said that many of the activities of human beings are made unconsciously or automatically, using a term according to computers, and this, can not be made by computers yet.
In this work I pretend to analyze the causes of why this expectatives not only were unclimbed but with the use of information technology another problem rose: a divide that do not seem easy to close by the moment, and which, is causing a big division between users who have and users who have not access to the electronic resources.

Now a days we talk about a Digital Divide that segregates those with lack of possibilities of using the digital formats at *Internet,* from the others, who count with them.
This phenomenon, seems to be multideterminated, but in this work will talk about some of them only.

In a subsequent work will be necessary to describe widely this problem in order to have a better comprehension of the elements involved and explain it from an integrating perspective.
Previously we saw that the most important limitation for the use of bibliographic materials was the economic status of the library in order to acquire materials and documents. But now the user has to face and confront new issues that make the access difficult or almost impossible, for instance:

1. Lack of telecommunications infrastructure .
2. Lack of computer equipment, updated and enough to rich efficient access to the information.
3. Lack of expert people who can handle equipment and new technology stuff.
4. Lack of a training team in computer and library resources.
5. Do not have users prepared enough in order to use and get benefits from them

The training or the capability of get benefits from technology and library resources has been called informative literate or informative abilities, to count with them , make an important difference between users and possibilities of access to information.

This differential access is not new, and its not created from the "digital divide" , users have different information supply, opportunities of use and ability to use the materials. That´s why this phenomenon results relevant, and deeper than specialists taught at the beginning. Those old expectatives that the use of technology would finish with the differences, not only are unclimbed but deeper and hard shaped now. Inequity and disparity in using information technology is larger every time. The rhythm of having access and improving technologies make those people who do not have opportunities, unprotected, isolated, facing a wider and deeper divide, plus the social, health, and educational divide, as always.

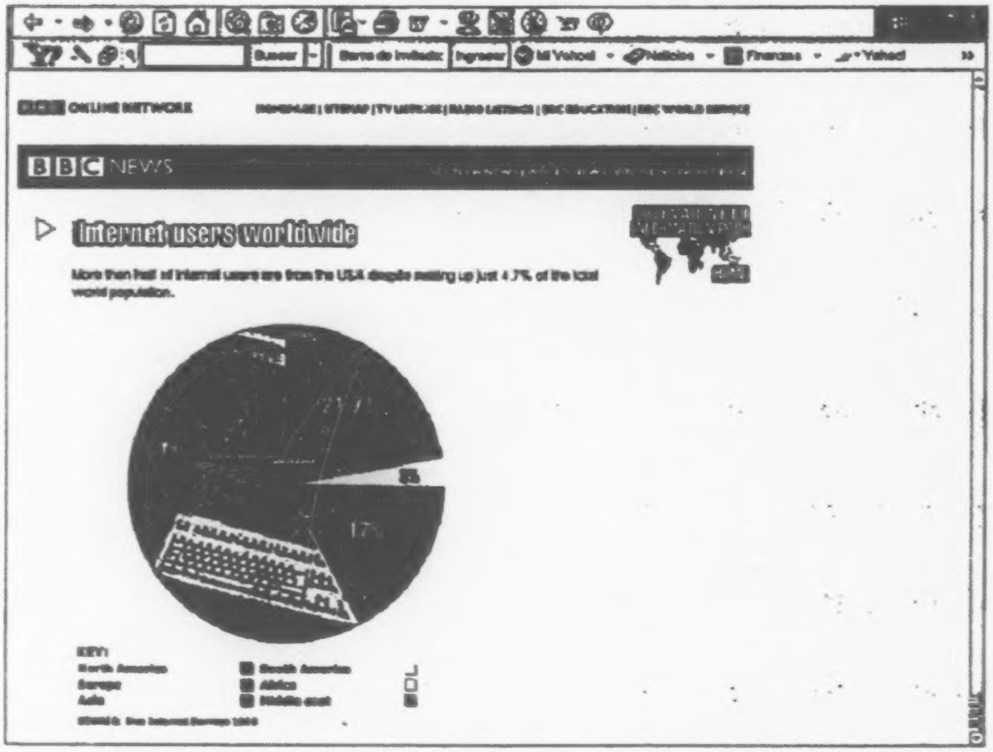
Last report from United Nations above human development in 1999 shows that in industrialized countries, with only the 15% of world population, hosts the 88% of the users of internet. (cited by Jane Black. BBC news online 15/01/01 p.1)

Under this point of view, problems with reference and access, are related with differences in tech-infrastructure among countries. Between a country and another there may be a lack of infrastructure, that makes the digital information unapproachable. And I refer to elements as simple as having electric energy and telephone lines, this, in developed nations, are subjects already solved.

While electric infrastructure in some countries is in XXI century, some other countries are starting to enjoy the electric energy by lightening their homes as we did two generations behind. This is the size of the divide, widening trough the days.

Developing countries have priorities before bridging the digital divide and make investments on internet access resources. " Our needs are health, water quality, dealing with higher rates of child mortality...... how could fast access to *Internet* change or improve that?" Argued Supatra Koirala, Director of Institute of Childhood
Protection in Katmandú, India. (cited by Jane Black. Ib Id. P.2)

Fig.1
More than half of Internet users are from the USA despite making up just 4.7% of the total world



BBC NEWS

Internet users worldwide

More than half of Internet users are from the USA despite making up just 4.7% of the total world population.

BBC ONLINE NETWORK
17%
KEY:
North America
Europe
Asia
South America
Africa
Middle east

In a recent study published by BBC on April 2001, statistics are dramatic, as previous graphic shows U.S owns 57% of *Internet* users and has only the 4.7 % of total population in the world. Meanwhile in Latin America, with a superior population than U.S. owns just the 3% of *Internet* users. This is serious, but situation in Africa
and Middle East is even worse .

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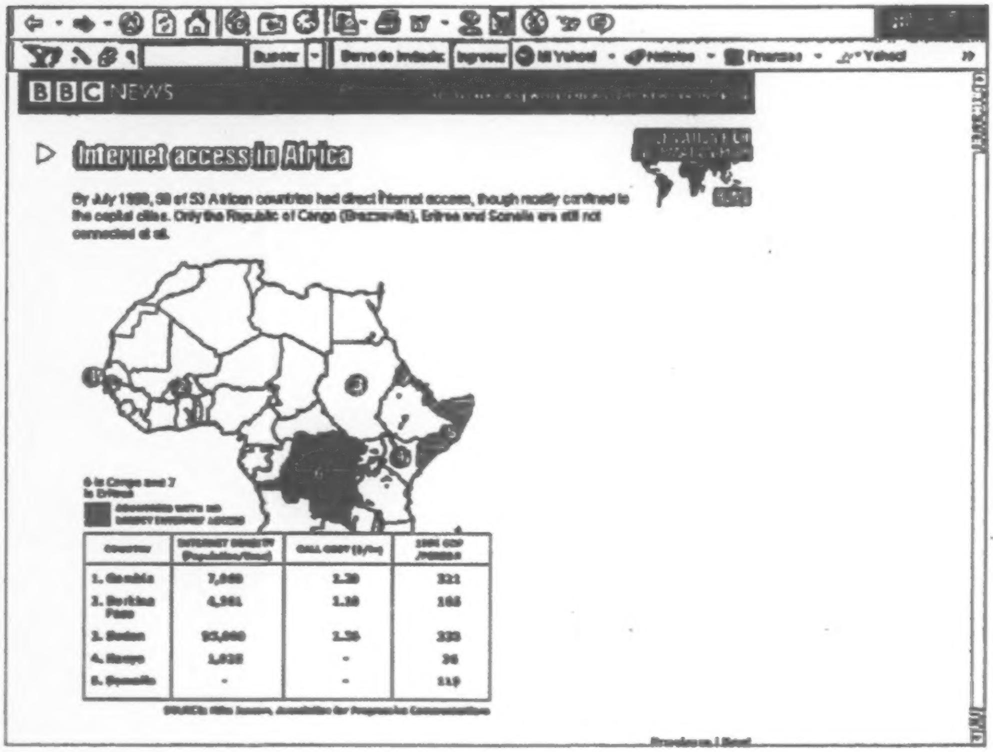
fig. 2. Internet Access in Africa.



BBC NEWS

Internet access in Africa

By July 1999, 50 of 53 African countries had direct Internet access, though mostly confined to the capital cities. Only the Republic of Congo (Brazzaville), Eritrea and Somalia are still not connected at all.

It is possible to see in fig .2 That there are some countries in Africa with direct Internet Access and some other have a low internet density. We should see the low income per person as part of the GDP

Intel Company, announces that in 2004 will be connected 1.3 billions of people, without using cable. (Newsweek, Special Edition, December 2000 p.21).
But results evident that not only INTEL, but all the infrastructure in telecommunications, needs develop in harmony, and no pieces be left.

Besides the develop of infrastructure is the issue that lack of specialized people causes that rich countries open up their borderlines, and those few specialists emigrate in order to get higher levels of income and better standards of living and professional improvement. Such as the measures announced by Germany in March of 2000 about this. Anyway, most of the specialists from developing countries wish moving to U.S. cause they feel that may have better choices there. (Rod Nordland, "The missing W on Web". Newsweek. Special edition p 72).

The industry sector creates hundred of jobs on information field, and government also contribute to this, in his last message to the nation , President Clinton confirmed his concern about information technology and its relevance, then announced his proposal for 2001 national budget, where he submit funds for *Internet* connection in libraries and classrooms in all the states, training programs for teachers and creating 1000 community centers with informational technology. (Goldsborough, bridging the digital divide. *Link up*, vol.17, Issue 3 may 2001 p.1).

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In 1999, federal, state and country expenses were of seven billion dollars for buying computers and software, after this, there are many schools with wonderful equipment, and modern materials doing a good job for community, but some others are unusefull, nobody know how to handle, Teachers have no training programs and can't transfer the abilities to their students, they are still "informatics illiterates".

The access to internet has differences and inequities among connections to the net and number of equipments, for instance, some Sates like Idaho has 88% of its schools connected to the web, and some others like North Caroline have only 56% connected. Some States has 3.5 students per every PC equipment and others like Alabama with 7 students per computer.

Fig.3 number of students per computer and number of school with Internet access in different States of US:

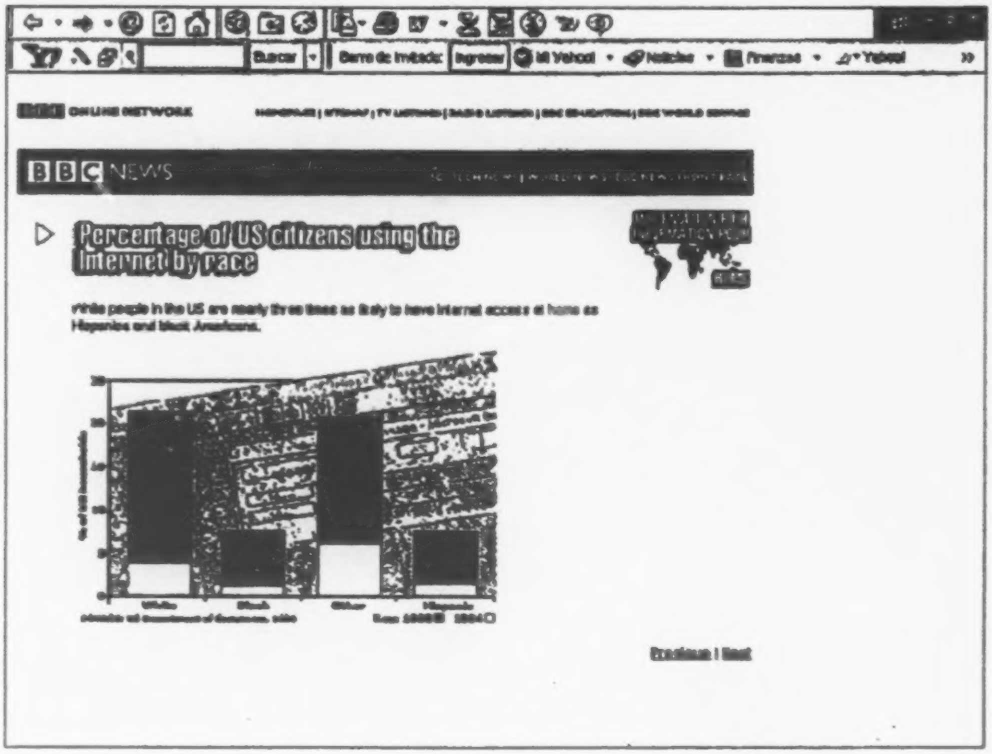
(Source: *Education Week Report*. Citado por Gordon op.cit

	Number of students per computer	Number of schools connected To internet
Alabama	7.0	53
Alaska	4.5	88
Arizona	5.6	67
Arkansas	5.6	66
California	6.1	67
Colorado	5.3	75
Connecticut	5.9	60
Delaware	5.3	91
Distrito de Columbia	5.4	70
Florida	5.0	66
Georgia	5.5	64
Hawaii	6.7	82
Idaho	5.3	88
Illinois	5.9	71
Indiana	4.5	74
Iowa	4.7	80
Kansas	4.3	65
Kentucky	5.3	76
Louisiana	7.4	83
Maine	5.8	85
Maryland	6.6	82
Massachussetts	6.1	65
Michigan	5.9	65
Minnesota	4.9	84
Mississippi	7.0	60
Missouri	5.2	74
Montana	44	78
Nebraska	3.8	87
Nevada	7.3	61
New Hampshire	6.8	79
New Jersey	5.7	66
New Mexico	5.3	62
New York	6.3	60

North Dakota	4.2	85
Ohio	5.4	78
Oklahoma	5.6	56
Oregon	5.6	83
Pennsylvania	5.5	60
Rhode Island	7.5	73
South Carolina	5.6	82
South Dakota	4.2	83
Tennessee	6.7	85
Texas	5.1	68
Utah	6.0	84
Vermont	5.6	78
Virginia	5.4	72
Washington	5.0	84
West Virginia	4.7	81
Wisconsin	4.6	70
Wyoming	3.5	79
Unites States	5.7	71

The United Nations Program for the Development, holds that only the 20% of richest population, owns the 93% of the access to the *Internet.* South Asia, which has the 23 % of the population of the world owns only !% of the users of Internet, more than a half of population in United States and a third of Europeans has internet access , in comparison with less than the 3 % of Latin-Americans and Caribbean people, mainly because of the high cost of the equipments. As an example, a common worker in Bangladesh needs 96 month of salary to buy a computer, in comparison with one-month salary of a north American citizen to acquire the same equipment. An interesting issue is the dramatic situation that almost half of total world population have never done a telephone call. (Conhaim, Wallys W. "The internet Digital Divide" *Link up* vol.17 issue 4 july/august 2000)

Fig. 4 Internet access by race



Percentage of US citizens using the Internet by race

White people in the US are nearly three times as likely to have Internet access at home as Hispanics and black Americans.

If we compare data between United States and the rest of the world, we realize that digital divide is huge and makes a difference in net using. But the problem of digital divide is also recognized as an internal issue in US, when the Trade Department accepts that inequity is a reality and is caused by inequities among American people. "The digital divide... is now one of America's leading economic and civil rights issue" . many individuals has no access to *Internet*, specially poor and or not educated, and those who live in rural or segregated areas, so, the divide is widening instead of bridging. We talk about civil rights because some authors mention that people have the right to live, and also the right to navigate on net, this is not only a simple comment, but the access to the net is gradually necessary for democratic ways of life in a country and the rest of the world.

This approach to the use of net in democratic processes is found in Arizona, where primary elections for the Democratic Party were conduced by web-based elections, participation was consistent, but many Indian citizens couldn't join to the on line event, due to the lack of *Internet* access (Davis Thomas "Ending the Digital Divide" *Educase review* january, 2001 p.2)

In this sense, democratic processes are part of globalization that the whole world is living. However, some countries have a tight control on web access, perhaps because they are afraid of the influence of some ideas and styles of living that they consider dangerous for the stability and permanence.
In an article from Chicago Tribune on 1st. march of 2001 fond a clear sample of this: "beleaguered by poverty, a lack of infrastructure, and a tight governmental control, Cuba's citizens face an uphill

battle to get online. According to government figures, Cuba has about 3,600 legal internet accounts, half of which have access to networks outside Cuba.
Many of Cuba´s legal *Internet* accounts are owned by government ministers and business, joint-venture corporations, and foreigners. While *Internet* is provided by universities, hospitals, and youth clubs, strict limitations are placed on the type of content users can access. Cuba´s only Cyber-café is not available to Cubans. Even the government relaxed its control of the *Internet,* the expansion of Cuban on line population is severely limited by the lack of Internet infrastructure in the island, it has only one phone line for every 23 Cubans . Power outages are common, and computer modems are difficult to obtain. With such limitations, the general consensus among Cubans is that future Internet access will be restricted to public cyber-cafes rather than private homes. (Chicago Tribune. "Bleak future for Cuban Internet". Mar 1st. 2001 nua internet suveys. P. 1)

Nothing can justify the limitations for the information and ideas fluency , that, goes against those people, whose rights to refreshing their knowledge, and confront their opinions with others, is actually denied, and have no choice in order to enrich their thoughts and receive democratic values background.

The Group of Eight had a meeting in Okinawa past 2000 year and paid special attention to digital divide and ways of bridging it, they didn´t reach an agreement at all but they pointed out two tendencies: the first one says that the divide can be solved by riching out technology and infrastructure, on the other hand, that digital divide will reduce if social and economic differences are supported, in that way, developing countries would enjoy the benefits from information technology .(Harrington J. Problems of Post-communism jan-feb 2001 vol.48 issue 1 p 65)

Some people add that digital divide is not correctly explained, it should be seen as
the difference between those who have access to the net and those who will have access later, as it shows in the study by University of Wisconsin
And Consumers Federation of America, entitled " Disconnected, Disadvantaged and disenfranchised: Exploration in Digital Divide" They found that half of the surveyed individuals were not connected at home and were not expecting to do in next 4 years. They were people with lower salaries, less educated, generally older and with no kids at home, and specially, belonging to some minority group,.

The often reasons for not being on line were the high costs and that they don´t know how to use it, neither its benefits, such as, participation in social activities, buying things easily, or being in touch with pubic servers. (Test Inform Project, Consumers union in Action. Exploring the digital divide. Consumers report february 2001, p. 69).

Some topics of the digital divide are of special interest, such as the information on line about medical and health issues, preventive measures, new discoveries or use and abuse of substances. It is an advantage count with these elements, it makes a great difference between own them and do not. Obviously a citizen can get the same information by other means but, as economists say "it has a lower benefit in the relation cost-opportunity ".
Is also interesting see how users quick to the on line services, there is a significant degree of desertion in this area. As it shows Katz and Aspeden study in 1998, they found that 8% people surveyed, deserted from using internet, the same percent that people connected in 1996.

	1995	**1996**
No acknowledge of internet	15%	10%
Know about Internet but not a user	69%	60%
Users of Internet	8%	19%
Deserted from Internet	8%	11%

Main reasons for quick:

1. They lost the access at jobs or schools	36%
2. Are not interested any more, is bored,.	23%
3. Troubles in using equipments	18%
4. Costs are high	7%
5. No reasons given	16%

source: (Katz &Aspeden "Internet dropouts in USA". *Telecommunications Policy.* Vol. 22 no. 4/5 1998 p 327-339)

Is interesting when we observe how statistics change depending on the sources and criteria of surveys, if come from trade or busyness agencies, we found differences in number of users or in population with access to new technologies, also when the studies are made from government agencies. So is important mention the source and criteria when we talk about statistics in technology of information

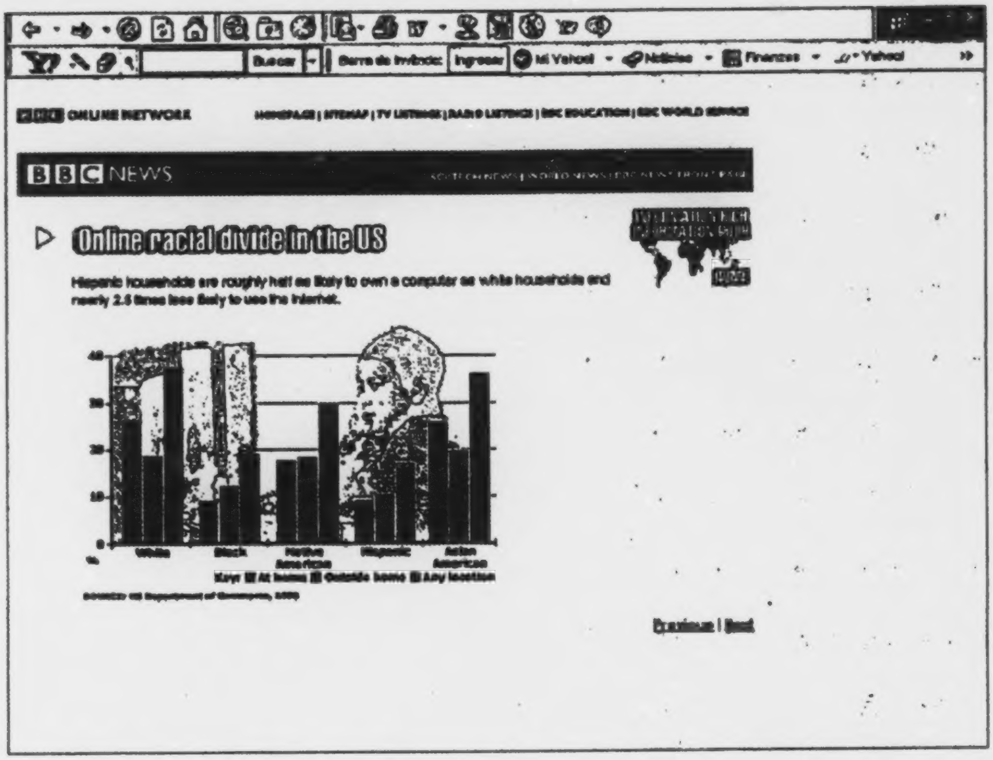
Grossman (2001), in his article at New York and I*nternet* are falling in a waste, because now a days *Internet* using is far from enclose the users to the information, culture and knowledge of scientific disciplines, the real boom of internet is the use of chats, porno Times assure that digital resources sites and "cybersex", and unfortunately this matter is increasing faster than the attempts for spread educational contents to all social levels, as was planned first. Dealing with this reality the author says that fortunately federal budgets for educational programs on line increase every year and there is a proposal named "A present for Nation" is a 18 million dollars program with a public portal and based on National Science Foundation model. (Grossman, Laurence. And Newton, Minow, New York Times. April 10 2001)

It would include on line literature programs, connecting people with "reading tutors" in a virtual one to one relation , offer universal access to most important manuscripts, art , pictures and treasures from museums in the world.

The idea of investment in educational and cultural programs in order to give a better use to information technology and electronic infrastructure , comes from teachers, librarians, scientific officers and even from young businessmen from computer field like Microsoft and Novell. Investments in this area do not change the *Internet* vigorous commercial mission, but let on line services carry on a more substantial work for individuals. If Congress approve this proposal on information and education field, then results might be observed in a medium term.

In 1998, US Department of Commerce made a study "Online racial divide in US" and results interesting how Hispanic population had half access than the other minority groups. It shows more than online possibilities, shows social-economical-educational conditions

Fig. 5 shows Hispanic householders are roughly half as likely to own a computer as white households and nearly 2.5 times less likely to use internet. (Source: BBC news online networks. "information poor...p.1)


Buscar
Barra de Invitado:
Ingresar
Mi Yahoo!
Noticias
Finanzas
Yahoo!
BBC ONLINE NETWORK
HOMEPAGE | SITEMAP | TV LISTINGS | RADIO LISTINGS | BBC EDUCATION | BBC WORLD SERVICE
BBC NEWS
40
30
20
10
0
%
White
Black
Native American
Hispanic
Asian American
Key: At home Outside home Any location
Previous | Next

Online racial divide in the US

Hispanic households are roughly half as likely to own a computer as white households and nearly 2.5 times less likely to use the internet.

SOURCE: US Department of Commerce, 2000

Now, let´s see what happens in and Latin America

Is important to say that variations in data depends on the source who gives the information, the purposes of the surveys and criteria of universe selected. In this sense we can explain variations and disparity in statistics data.

According to NUA Internet Surveys firm , which design studies and surveys for several countries, Digital divide persists in Latin America, On the other hand, based on "Dataquest report" on April 2001 owned by Gartner assure that digital divide is widening too; in that report, studied the access to basic telephone services and to broad band internet access services, while 80% of US consumers have telephone connections, only 24.5 % of Chileans do, and Chile has the highest number of phone connections per capita of the Latin-American countries studied. (NUA Internet Surveys. www.nua.com/surveys april 4 2001 p.1)

Latin America also trails far behind the US in terms of broadband use. Over 6 million Americans have broadband internet access, while only 53,000 Brazilians,38,000 Argentineans, 22,000 Chileans and 20,000 Mexicans do. There are no broadband subscribers in Colombia, Venezuela and most of the rest of Latin America (Dataquwest. www.nua.com/surveys/ 6 may 2001 p.1)

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On the other hand, Reuters, a press agency says that IDC has predicted that there will be 75 million of users in Latin America by 2005 up from 15 million last year. An analyst from IDC said that Internet audience would grow by an average of 40% each year between now and 2005.
Internet users grew by 136% in Latin America last year, but the medium remains largely the preserve of the elite of the region, according to Yoshio Utsumi, The Secretary- General of the International Telecommunications Union .

In a speech at the Telecom Americas Conference on April 13 of 2000, Utsumi warned that Latin-American and the Caribbean could be left behind in the new economy. Only about 2.7% of the 500 million strong population owns a computer that can access *Internet.*

Utsumi fears that *Internet* penetration growth in the region is not happening quickly enough to catch up with developed countries. Computers and telephone line penetration need to increase rapidly and a dedicated *Internet* backbone for the region is also direly needed. The prognosis is not entirely bad: The booming cellular phone market in Latin America could help to increase internet penetration, said Utsumi. Online trade in the region is expected to be worth USD 72 billion by 2005 and this trade will be largely dominated by Mexico and Brazil (Reuters. Apr 04 2001 in NUA Internet Surveys. www.nua.com/surveys)

Mexico Facing Digital Divide.

Mexico is a country of contrasts, official data shows that in 1998 5.7% of the families had a computer, only 34% had telephone line and 86% of homes had Television. Now in 2001 exists many sources and firms making surveys and giving information about users. The latest for instance is from Nielsen NetRaitings who assure that Mexico is now the second largest market with *Internet* access, there are 6 million people online and make us own the second place after Brazil with 10.4 million home *Internet* access.

3.3 millions of the total in Mexico are active users spending an average of 8 hours each one at month. Over 87% of *Internet* Mexican users visit search engines or portals and 80.6 visit the sites of telcom and *Internet* providers. Even Mexico has the second place in on line access this firm found that spend more time navigating than Brazilians per month and visiting more sites and web pages every time we go on line, which results interesting. (Nielsen Netraitings NUA Internet surveys. Jun11 2001. P1).

Chairman of IBOPE e-ratings, Gerardo del Pozzo, presented de preliminar results from a study about people on line in Mexico. And is coincident with Nielsen Netritings, Mexico have 6.7 millions of internet users, 3.3 millions are active users. The report from IBOPE sounds optimistic among investors and *Internet* Industry in general due to market is wider than they expected . 57% of Mexican users are males and female 43% . The sample for this study was of 5,000 individuals aleatory selected but only with home access to net.

On the other hand. National Institute of Geography and Statistic (INEGI) registered in 1998 only 55% of 22 million of homes had residents who know how to use the computer. While U.S owns the 54% of internet users Mexico only has 0.31% of users in the world. And while Canada has 260 equipments for every 1000 citizens Mexico has 65 computers for the same amount of people. And the major part of them are concentrated in the capital and big cities.

Fig. 6 EQUIPAMIENTO DE LOS HOGARES

	1992 #	**%**	**1994 #**	**%**	**1996 #**	**%**	**1998 #**	**%**
Hogares con computadora	349,443	2.0%	640,224	3.3%	643,660	3.1%	1,262,884	5.7%
Hogares con teléfono	3,870,127	21.7%	4,974,705	25.6%	5,271,599	25.8%	6,735,874	30.4%
Hogares con televisor	14,735,101	82.7%	16,519,714	85.0%	17,682,026	86.4%	19,113,407	86.2%
Hogares con TV por cable	nd	nd	1,196,079	6.2%	1,012,154	4.9%	1,363,222	6.2%
Hogares con videocasetera	5,276,316	29.6%	6,631,096	34.1%	6,519,537	31.9%	7,178,685	32.4%
Total de hogares	17,819,414		19,440,278		20,467,038		22,163,568	

Fuente: Encuesta Nacional de Ingresos y Gastos de los Hogares 1992, 1994, 1996 y 1998. INEGI.

Dealing with this situation Mexican government announced a project which principal target is provide to 950,000 professors in basic schools of an equipment and training in order to use it daily. It is true that this is not the solution for the lack of infrastructure and trained people in access to the new technologies but is a modest effort trying to solve the wide digital divide and delaying in educational field. (Carlos Reyes. *Reforma.* Nacional. May 4th 2001 p.11)
Access to information as we can see is seriously affected, specially for those people poor and with lower income or for those who work in institutions with limited resources.

Fig.7 HOGARES CON COMPUTADORA POR ESTRATOS DE INGRESO

1996 1998										
Rangos de salarios mínimos mensuales	Hogares por estrato		Hogares con computadora		Acumulado en orden inverso	Hogares por estrato		Hogares con computadora		Acumulado en orden inverso
	#	%	#	%	%	#	%	#	%	%
De 00.00 a 04.00	9,621,737	47.0%	6,699	1.0%	100.0%	10,410,484	47.0%	21,596	1.7%	100.0%
De 04.01 a 08.00	6,335,657	31.0%	78,787	12.2%	99.0%	6,706,355	30.3%	175,570	13.9%	98.3%
De 08.01 a 12.00	2,215,921	10.8%	99,211	15.4%	86.7%	2,379,134	10.7%	244,873	19.4%	84.4%
De 12.01 a 16.00	987,532	4.8%	97,234	15.1%	71.3%	1,053,595	4.8%	203,039	16.1%	65.0%
De 16.01 a 20.00	491,375	2.4%	106,530	16.6%	56.2%	524,261	2.4%	163,036	12.9%	48.9%
De 20.01 a 24.00	225,405	1.1%	71,868	11.2%	39.6%	363,758	1.6%	117,169	9.3%	36.0%
De 24.01 a 32.00	240,613	1.2%	53,294	8.3%	28.5%	317,278	1.4%	134,843	10.7%	26.7%
De 32.01 y más	348,798	1.7%	130,037	20.2%	20.2%	408,703	1.8%	202,758	16.1%	16.1%
Total	20,467,038	100.0 %	643,660	100.0 %		22,163,568	100.0 %	1,262,884	100.0 %	

Fuente: Elaborado con datos de la Encuesta Nacional de Ingresos y Gastos de los Hogares 1996 y 1998. INEGI.

In a short telephone-survey made by the "Reforma" Newspaper found that more than half of children between 8 and 11 years old have used the computer as a tool for school activities, only a 40% of them have navigate in on *Internet* The sample was of 522 children from all country and from those who has used it only 54% has it at home, the rest in school , relatives or and internet-cafe. About the use they found that 40% of the children use it for playing games. Plus than only 27% owns an e-mail address.

Fig. 7 HOGARES CON RESIDENTES QUE SABEN UTILIZAR COMPUTADORA

SI SABEN	44.6%
NO SABEN	55.4%
TOTAL	100.0%

Resultados del Módulo de Computación aplicado en la Encuesta Nacional de Empleo Urbano en 44 áreas urbanas del país. Periodo de levantamiento del 13 al 26 de julio 1998.

At this point we can analyze the example of access to the information at National Autonomous University of Mexico, specially access to data bases and full text publications. The Institution has made a huge effort in order to make this an easy and inexpensive process for students. Access to information in National University can be via Intranet or via *Internet,* for that purpose, counts with a large number of computers distributed in libraries, laboratories, classrooms and offices. On the other hand there is a wide and significant data base collection covering all the areas and fields, number of journals and periodical reviews are more than 5000. If we compare this collection with other Institution it is possible to notice that users at UNAM are in better conditions for access to information than other users, from smaller universities do . Even inside the National University there are differences in type and quality of access to information since some of the students have *Internet* at home and others do not . We must remember that most of our students are the first generation of professionals in their homes due to that many of them do not count with an educational background and support in buying or using the equipments at home. And commonly, they live in small houses with only one or two rooms, and they have to do their homework in the same place where family eat, iron and watch T.V. . As we can see differences among those who have access and those who do not, is common to all the countries and Mexico is not an exception, by contrast, number of users of Internet at home is increasing faster than we can preview. As surveys pointed it out.

Fig. 8 HOGARES CON COMPUTADORA POR ESCOLARIDAD DEL JEFE DE FAMILIA

1996 1998								
	Total de hogares	**Hogares con computadora**	**Distribución porcentual**	**Acumulado en orden inverso**	**Total de hogares**	**Hogares con computadora**	**Distribución porcentual**	**Acumulado en orden inverso**
Ninguna	3,316,532	19,876	3.09%	100.0%	3,515,976	12,265	1.0%	100.0%
Primaria	9,369,266	53,147	8.26%	96.9%	10,045,097	145,931	11.6%	99.0%
Secundaria	3,572,480	50,142	7.79%	88.7%	4,067,053	142,304	11.3%	87.5%
Preparatoria	1,909,133	103,694	16.11%	80.9%	2,012,865	182,355	14.4%	76.2%
Licenciatura	2,077,707	326,020	50.65%	64.8%	2,329,721	665,677	52.7%	61.8%
Postgrado	221,920	90,781	14.10%	14.1%	192,856	114,352	9.1%	9.1%
Total	20,467,038	643,660	100.00%		22,163,568	1,262,884	100.0%	

Fuente: Elaborado con datos de la Encuesta Nacional de Ingresos y Gastos de los Hogares 1996 y 1998. INEGI.

We can assure that digital divide is not only widening or bridging but is going in many directions and dimensions, has distinctive signs related with local conditions and also owns general characteristics common to almost all societies and countries, besides of this, when we observe, governments and citizens generate several actions in order to bridging it, but when we get deeper in this phenomenon we discover more and more variables and conditions over it.

Is important to assume that as specialists in information and new technologies field, knowing, and understanding of all those factors involved in digital divide, represent an engagement of refresh and keep in touch with our realities.

The expectatives are not pessimistic and we are sure that people will rich out the access, but when it happen, those who were enjoying technology and internet benefits before, must have advanced steps below and the divide keep existing and even wider. Our mission then, would be trying to stretch it, or at least, understand the differences . Government, professors, librarians, technologists, specialists in computers and whole society must do an effort for seeing technology as part of the solution instead of seeing it as a problem. Access to the net and the benefits beside it is a challenge that information technology has offered to us.

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67th IFLA Council and General Conference
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Code Number: **036-115a-E**
Division Number: **VII**
Professional Group: Education and Training
Joint Meeting with: -
Meeting Number: 115a
Simultaneous Interpretation: -

Perspectives on education for knowledge management

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Abstract:

This paper looks at the state of education in knowledge management (KM). It reports findings from a study of knowledge management courses included in the curriculum of academic disciplines of business, computing, and information. Based on a review of course descriptions selected from web sites of universities in Australia, Canada, Singapore, UK, and USA, the paper describes levels of courses, curriculum areas and topics, and differences in emphasis in teaching knowledge management courses in different departments and schools.

INTRODUCTION

Several papers have highlighted the need for preparing libraries and information centers and information studies education programs to quickly and appropriately respond to the changes being introduced by the emergence of knowledge-based economy, knowledge management discipline, and e-business. Reardon (1998) suggested that information and library science rightfully resides in the emerging field of knowledge management and that elements useful to knowledge management have been present in syllabi for some long time. Ruth, Theobald, and Frizzell (1999) have commented that knowledge management practices have been elaborated in books, articles, cases, and symposia for almost a decade, with particular acceleration during recent years. However, only a small number of universities offer KM courses today. They highlighted the need for introduction of more courses in the area of knowledge management and recommended modules including knowledge creation, history of KM theory, and knowledge coding, etc. Corrall (1999) noted that there has been a phenomenal growth in interest and activity in knowledge management, as seen in many new publications, conferences, IT products, and job advertisements. She pointed out that KM does not seem to have been had much impact on the higher education sector so far, but there is some evidence of involvement. Davenport and Cronin (2000) suggest that knowledge management is a complex and multidimensional concept that requires diverse insights. They alert information professionals that a partial understanding of KM by different domains may result in an overemphasis on different aspects of knowledge management. We feel that such an imbalanced approach may influence curriculum designing in information studies programs. We would, therefore, like to emphasize on the need for investigation of knowledge management education in different disciplines and the need to deploy appropriate strategies to introduce well-thought out courses on knowledge management in information studies programs.

This paper reports the results of a study on perspectives of knowledge management education in academic disciplines that are currently involved in teaching KM courses. The study was conducted at the Division of Information Studies of the Nanyang Technological University in Singapore during the Second Semester of the 2000-2001 Academic Year. The research aimed at investigating the differences in approaches to KM education by the various education providers focusing on the following questions:

1. Who are the main education providers (in which disciplines are the KM courses offered)?
2. At what level are the KM courses taught (undergraduate or graduate)?
3. What are the major contents of general KM courses?
4. What is the primary emphasis in courses that explicitly address the subject of knowledge management?
5. What are the differences in emphasis in KM courses in different academic disciplines?

Data on curriculum and other related details were collected from a sample of 37 knowledge management courses offered by universities located in five countries: Australia, Canada, Singapore, UK, and USA. These courses were selected from a list yielded by an extensive search on the Internet using the following criteria:

- Courses offered for academic credit at undergraduate or graduate level (short courses, seminars, practical training programs, and activities for professional development or continuing education were excluded).
- General courses designed to provide an overview of important topics related to knowledge management (specialized courses like competitive intelligence, organizational communications, etc. were excluded).
- Courses sponsored by universities and other similar institutions recognized for granting academic or professional qualifications (KM programs offered by consultants, management companies, or professional associations were excluded).

We collected information about coverage of KM topics in courses offered by different disciplines. Our objective was to determine current trends rather than compiling an inventory of current courses. Courses without sufficient description and detailed outline topics had to be dropped from analysis of contents.

In the first phase of our study, we restricted our analysis to course descriptions available on the web. We intend to collect additional information for validation and verification and more detailed analysis in the second phase of the project by conducting an online survey seeking information on course details from the faculty members who taught these courses.

CURRENT STATE OF KNOWLEDGE MANAGEMENT EDUCATION

Education Providers

KM courses are mainly offered at the graduate level. Out of the 37 KM courses included in our study, only seven are at undergraduate level, while 30 courses are at the graduate level, designed as part of a master's program. These KM courses are from the areas of business, computing, and information. These courses are part of the curriculum in the departments of information systems (either in computing or business schools) and the divisions of information studies (generally in schools of library and information science, with a couple of exceptions). The highest number of KM courses reviewed in this study is part of the master's degree in information systems or studies (MS, IS) - 40%. The second highest number of KM courses is for the master in business administration (MBA) - 35%. Figure 1 and 2 show the spread of KM courses by schools and academic programs. Specific details about courses are given in Table 1.

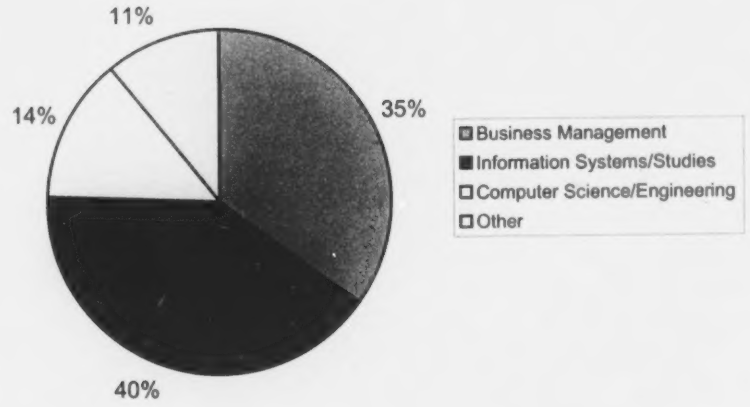

Figure 1: Schools Offering KM Courses

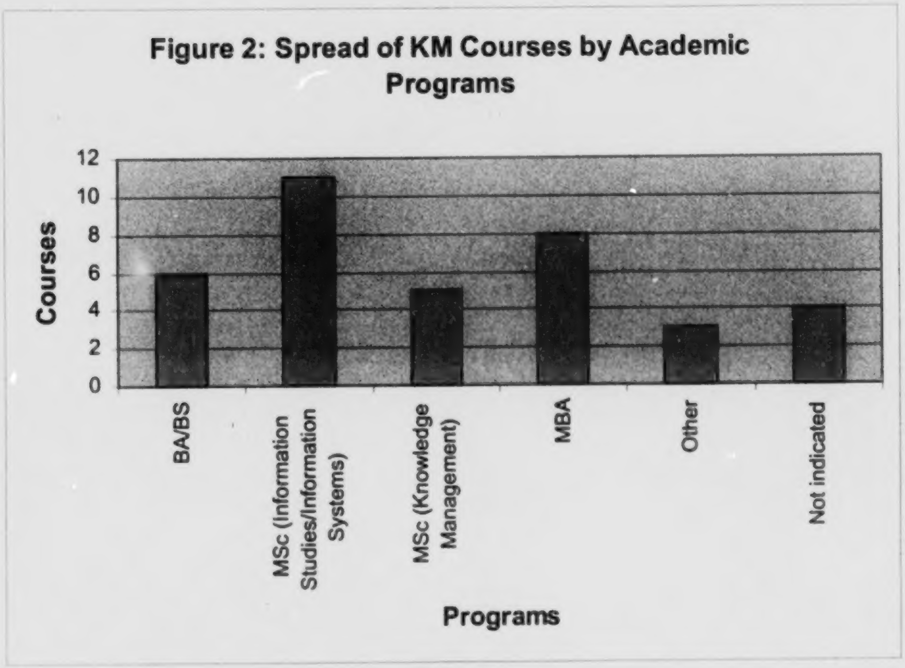

Figure 2: Spread of KM Courses by Academic Programs

Table 1
Details of Knowledge Management Courses

UNIVERSITY	SCHOOL/ DEPARTMENT	COURSE TITLE	LEVEL	ACADEMIC PROGRAM
AUSTRALIA				
University of Melbourne	Department of Information Systems	Knowledge Management in Organizations	Undergraduate	BA/BSc
Monash University	School of Information Management and Systems	Knowledge Management	Graduate	Master of Information Management and Systems
Royal Melbourne Institute of Technology, Victoria	Department of Information Management and Library Studies	Knowledge Management	Graduate	Master of Information Management and Library Studies
University of Technology, Sydney	Department of Media, Communication and Information	Knowledge Management	Graduate	MA in Information (with specialty in KM)

CANADA				
University of Toronto	Faculty of Information Studies	Organizational Knowledge Management	Graduate	Master of Information Systems
University of British Columbia	School of Archival, Library & Information Studies	Knowledge Management	Graduate	MS (LIS)
Queens University, Kingston, Ontario	School of Business	Knowledge Management Systems	Undergraduate	BA/BSc
University of Alberta, Edmonton, Alberta	School of Communication	Knowledge Management and Communications Technology	Graduate	MA in Communications Technology
SINGAPORE				
Nanyang Technological University, Singapore	Division of Information Studies	Knowledge Management	Graduate	Master of Information Studies
UK				
The Open University	Business School	Managing Knowledge	Graduate	MBA
South Bank University	School of Information Systems and Mathematics	Knowledge Management Systems	Graduate	MSc Knowledge Management
University of Sc & Technology, Loughborough	Department of Information Science	Information and Knowledge Management	Undergraduate	BSc
University of Central England, Birmingham	School of Information Studies	Knowledge Organization and Management	Graduate	MSc Knowledge Management
Schefield Hallam University	Scheffield Business School	Knowledge Management	Graduate	MSc Knowledge Management
University of Northumbria, Newcastle	Business School	Knowledge Management	Graduate	MBA
University of Southhampton	Department of Electronics and Computer Science	Knowledge Technologies	-	-
Leeds Metropolitan University	School of Information Management	Information and Knowledge Management	Graduate	MSc E Commerce
Robert Garden University	Centre for Knowledge Management	Knowledge Management	Graduate	MSc Knowledge Management

USA				
University of Alabama	School of Library and Information Studies	Issues in Librarianship: Knowledge Management	Graduate	Master in Library & Information Science
North Carolina University	Department of Business Management	Knowledge Management	Graduate	MBA
University of Washington	School of Health and Community Medicine	Knowledge Management in Health Services	Undergraduate	-
University of Washington	School of Information	Knowledge Management Seminar	Graduate	MS
Temple University	School of Business Management	Knowledge Management in E Business	Graduate	MBA/MIS
Claremont University	Graduate School of Information Sc	-	Graduate	-
Dominion University	Graduate School of Library & Information Science	Knowledge Management	Graduate	MS Knowledge Management
University of California at Berkeley	School of Information Management & Systems	Management of Information Systems and Services	Graduate	MS (LIS)
University of Texas at Austin	McCombs School of Business	Information and Knowledge Management	Graduate	MIS
University of Maryland	Robert Smith College of Business	Globalization of Knowledge Management	Graduate	MBA
George Mason University	Graduate Business Institute	Leveraging Information Technology: Knowledge Management	Graduate	MBA
George Washington University	School of Engineering & Applied Science	Intelligent Systems & Knowledge Management	Graduate	-
University of Colorado	College of Education (LIS Program)	Knowledge Management	Graduate	MLIS
University of Minnesota	Carlson School of Management	Knowledge Management	Graduate	MBA
University of Southern California	Marshall School of Management	Knowledge Management	Undergraduate	BS
DePaul	Graduate School	Knowledge	Graduate	MBA

University	of Business	Management		
Kent State University	Kellstadt Graduate School of Business	Information Architecture and Knowledge Management	Graduate	MSc
New York University	Stern School of Business/ Dept of Information Systems	Knowledge Management and Decision Systems	Undergraduate	BS
Georgia Southern University	College of Business Administration	Knowledge Management	Undergraduate	BS

Course Contents

A review of the contents of the knowledge management courses offered by business, computing, and information schools indicated that the following topics are listed in most of the courses: concepts related to knowledge, tools to exploit the potential of knowledge, strategies employed by organizations to manage knowledge, and support systems needed to sustain the knowledge management initiatives. We grouped frequently listed topics into five main curriculum areas. These areas can be considered fundamental in general KM courses. Table 2 shows topics that are frequently listed under these fundamental areas. These topics were listed under different terms and names and were grouped under different headings in the course descriptions. We have rephrased the topics and rearranged them under the fundamental areas for convenience.

Table 2
Curriculum Areas and Topics in Knowledge Management Courses

CURRICULM AREA	TOPICS
1. Foundations	Definitions and complexity of knowledge Forms of knowledge (tacit, explicit) Sources of Knowledge (best practices, communities of practice) Knowledge workers Intellectual capital Knowledge-based organizations Knowledge management process Knowledge management enablers Knowledge sharing models
2. Technology	General overview of commonly used technologies Selection and design considerations for KM enabling technologies KM Architecture KM Tools and applications Collaboration (groupware tools) Business Intelligence (data analysis tools) Document Management Systems Intranets/Portals/Web sites
3. Process (Codification)	Knowledge audit Capturing and acquisition of knowledge Knowledge mapping

	Organization and categorization of knowledge resources Developing and maintaining knowledge repositories Search and retrieval, use, and re-use of knowledge
4. Applications	Case studies and success stories of KM application in consulting firms and IT companies Considerations for knowledge management applications in different sectors and industries Implementing a KM project in an organization
5. Strategies	Integrating knowledge into organizational work to gain leverage from organizational knowledge resources Steps for sustaining the KM work Institutionalization of KM activities Human resources and support (role and responsibilities of knowledge professionals) Measurement of knowledge assets

Differences in Perspectives

Emphasis in course contents varied from more technology oriented contents in computing departments to management oriented in library and information science and business management departments and schools. KM courses offered in business schools focused more on topics like intellectual capital, measurement, and business cases while information systems and studies departments focused more on knowledge repositories and developing and managing contents.

A review of topics listed under main modules in the course descriptions indicated a primary emphasis on pro-sharing culture, organizational restructuring, and change management in business schools. Information systems and studies departments tend to focus more on organization of knowledge resources emphasizing on topics like taxonomies, knowledge mapping, and knowledge policies. Topics listed in course descriptions in computing departments demonstrate an emphasis on tools, particularly the technology. Their course outlines include topics related to technology for delivering knowledge resources like search engines, intranets, portals; collaboration technologies like Lotus Notes and Microsoft Exchange; Documents Management Systems, and different types of data and information analysis tools for business intelligence like data mining, data warehousing, etc.

While all disciplines emphasize in their courses the need for understanding of principles of knowledge management, such as creation of conducive environment, and promotion of pro-sharing culture for successful knowledge management work, differences in perspectives about knowledge management seem to have influenced the curriculum design in different departments and schools. In business management schools, the KM curriculum appears to focus more on knowledge based organizations, emphasizing more on strategic planning and change management. On the other hand, contents of KM courses in information schools show a slant towards information organization and management, emphasizing on information needs, resource selection, and information search and retrieval. The contents of KM courses in computing schools show a clear emphasis on information system aspects, focusing more on implementing KM enabling technologies and data analysis tools.

CONCLUSIONS

Our analysis of state of the KM education was an initial foray into an important and expanding area of investigation. This exploratory study has demonstrated the need for inclusion of core topics related to knowledge management either in existing foundation courses or in the form of introducing a basic course on knowledge management. Information studies programs with ambitions of introducing a knowledge management specialty ought to add additional courses on knowledge organization, KM enabling technologies, and knowledge-based organizations, in addition to the introductory course on knowledge management covering basic topics of knowledge concepts, technologies, processes, and strategies.

Further research is required on a larger scale to gather data from more schools and departments and detailed analyses based on comprehensive course information rather than just the outlines on the web.

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A bounded or unbounded universe?: Knowledge Management in Postgraduate LIS Education

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Abstract:

[The School of Computer and Information Science at ECU has made a commitment to teaching Knowledge Management (KM) and is, at present, engaged in the process of determining its place within existing postgraduate LIS and IT courses. In turn, it is engaging in debate with other academics and industry practitioners about the unique contribution that the LIS disciplines could make to KM. This paper reports on the research and consultative processes that the School undertook and discusses the findings and conclusions. It will also offer some thoughts on where the authors believe LIS, in particular, can make a contribution to the core knowledge and practice of KM].

Background and Introduction

Knowledge Management (KM) has been practiced and reported on for a number of years. As early as 1988, Peter Drucker called attention to the primacy of knowledge assets in the future success of companies. By 1994, many articles addressed the importance of the individual employee's knowledge as opposed to the company's databases and reports (Ruth, Theobald and Frizzell, 1999). As the early enthusiasm for the concept subsides in the current management literature, KM is becoming part of the corporate culture of large complex organizations, especially those that operate in a multinational environment. Early insubstantial applications of KM theory and practice have given way to broadly focused initiatives that are transforming the way organizations work (Davenport, 2000). Despite this integration of KM theory and practice into the core operations of organizations worldwide, very few universities offer courses in this discipline area. One of the reasons for this is the difficulty of determining the intellectual territory to be covered by any viable and practical KM course (Ruth, Theobold, & Frizzell, 1999). Consequently, there is an undeniable tendency among university educators to see KM as an unbounded universe and just too hard.

Framing Knowledge Management

Researchers and practitioners in the fields of computer and/or information science have tended to equate KM with the management of information, that is the management of objects that can be identified and handled in information systems. Those that have been educated in the disciplines of philosophy, psychology, sociology and/or business and management have traditionally equated KM with the management of people. They believe that knowledge managers are primarily involved with assessing, changing and improving individual human skills and behaviour and that knowledge is a series of processes, a complex set of dynamic skills and expertise that is constantly changing (Sveiby, 2000).

Recently, commentators have argued that KM deals with a range of approaches to communicating and using both knowledge and information. They maintain that KM is made up of both the hard technical problems of knowledge storage, retrieval and dissemination and a whole range of softer issues that involves fostering an environment in which knowledge and information are shared and new knowledge is created (Bukowitz & Williams, 2001). These commentators argue that the human aspects of knowledge creation are critical for sustaining knowledge management systems that facilitate inquiry based on divergence of meanings and perspectives. They also assert that the human nature of knowledge creation seems more pertinent now than it was twenty-five years ago, given the increasingly 'wicked' environment characterised 'by discontinuous change and a "*wide range of potential surprise*"' (Malholtra, 1997).

Peter Drucker, writing about KM in 1999, argued that:

> 'What we call the Information Revolution is actually a Knowledge Revolution. What has made it possible to routinize processes is not machinery; the computer is only the trigger. Software is the reorganization of traditional work, based on centuries of experience, through the application of knowledge and especially of systematic, logical analysis. The key is not electronics; it is cognitive science' (Drucker, 1999).

Ruth, Theobald and Frizzell (1999) believe that KM will someday be taught across the academy, and they recommend a University-based approach to the diffusion of KM concepts and practice. They argue that it is possible for courses as varied as finance, accounting, management, psychology, public policy, medicine, marketing, computing and information science to include a knowledge management component and, as more courses appear at universities, 'significant changes to the understood core of KM knowledge and practice will occur' (Ruth, Theobald and Frizzell, 1999). If they are correct, it follows that, during the process of dissemination and assimilation, each discipline area may make its own contribution to that 'understood core'.

As researchers and practitioners in the field of computer and information science, we have skills and expertise in the field of information management. The topics covered by this discipline area are now well defined and, in the more general debate, it is agreed that they make a substantial contribution to knowledge management theory and practice.

In the section that follows we have attempted to chart the history and the development of a new field, which we have chosen to define as 'knowledge computing', and show how it contributes to the overall theoretical base of KM. It is our view that a major issue all educators must face in course design, concerns *Knowledge Management's* relationship with what we call *Knowledge Computing*.

Knowledge Computing for Knowledge Management

Knowledge Computing is about the construction of Knowledge Management *Systems* informed by a body of discipline knowledge inherited from information science and computer science. The current interest in knowledge computing is sustained by factors such as globalisation, down-sizing (Al Dunlap may have bitten the dust, but the idea lingers) and of course, the Web, which has become a delivery vehicle for knowledge management solutions.

The Web began life as a hypermedia document delivery system, but has since become established as a computer-based knowledge-sharing tool. The runaway success of the Internet speaks eloquently for the power of a system that makes it easy for users located anywhere to contribute knowledge and to access knowledge contributed by others. This model has been adopted and adapted to create intranets, improving knowledge management for all kinds of enterprises.

The key part played by Web technology has made other computing technologies more relevant and brought about renewed interest in some old ideas. Among existing technologies that are being incorporated into computer-based knowledge management solutions are expert systems, intelligent agents, decision-support systems, natural language processing, information retrieval and electronic document management. In Figure 1 the left hand side shows some knowledge management tasks making up a knowledge cycle, while the right hand side shows some information systems and computing technologies that can be used to support these tasks.

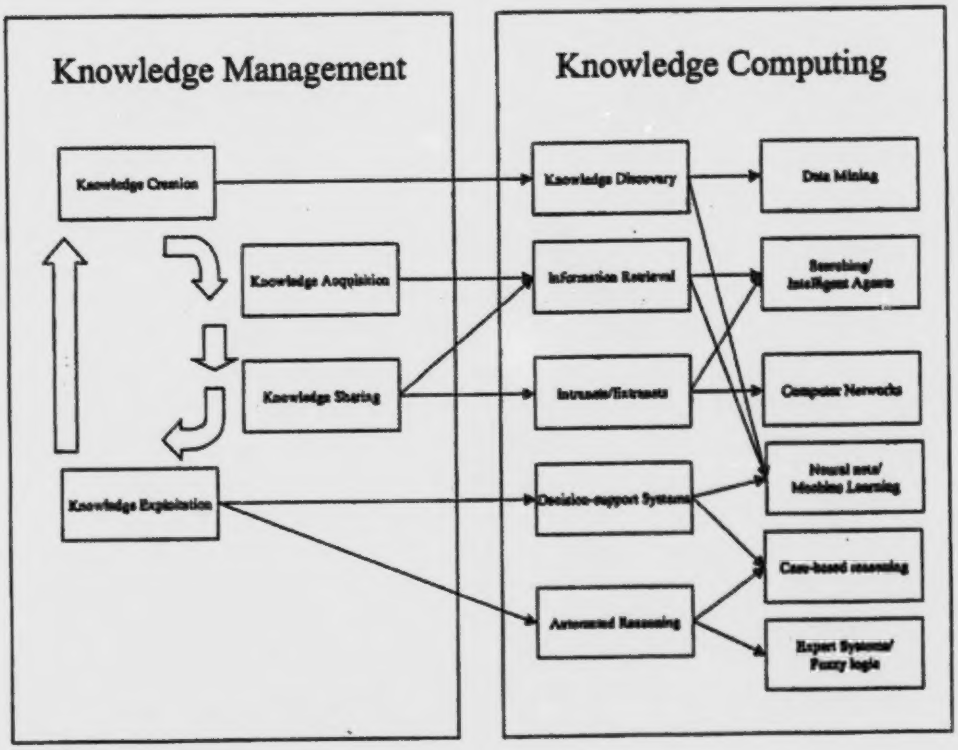

Knowledge Management
Knowledge Computing
Knowledge Creation
Knowledge Acquisition
Knowledge Sharing
Knowledge Exploitation
Knowledge Discovery
Information Retrieval
Intranets/Extranets
Decision-support Systems
Automated Reasoning
Data Mining
Searching/
Intelligent Agents
Computer Networks
Neural nets/
Machine Learning
Case-based reasoning
Expert Systems/
Fuzzy logic

Figure 1 - Some computing technologies supporting knowledge management tasks

These revitalised technologies are in turn enabling the continued evolution of the next generation Internet – the Semantic Web, introduced by Tim Berners-Lee, one of the creators of the Web (Berners-Lee, 1998). In a recent article in Scientific American. he describes it thus:

> "The Semantic Web is not a separate Web, but an extension of the current one, in which information is given well-defined meaning, better enabling computers and people to work in cooperation."
>
> (Berners-Lee et al., 2001)

The first requirement for the Semantic Web is a universal knowledge representation system, to provide a common language allowing knowledge from disparate sources to be understood, combined and manipulated. Knowledge representation has long been studied in the field of artificial intelligence, and at least the taxonomy aspect of it has been well studied in LIS. But the Semantic Web requires a decentralised knowledge representation scheme.

This is where knowledge representation systems from artificial intelligence, classification schemes from LIS and mark-up languages from electronic publishing converge to provide the solution. eXtensible Markup Language (XML) lets us include structured information in documents, and Resource Description Framework (RDF) provides the way to associate agreed meaning to this information, using Universal Resource Identifier (URIs) to refer to concepts defined in ontology pages on the Web. For complete and up to date details on these technologies and ongoing developments, visit the World Wide Web Consortium home pages at www.w3c.org.

Ontologies are long familiar to LIS practitioners, who are adopting RDF and RDF Schema as the implementation language for defining metadata. Ontologies can contain inference rules as well as data, allowing sufficiently capable tools to carry out intelligent searches, reason about answers to user queries etc.

Agent technology, another established field of study in artificial intelligence, has also received a boost from the rise of Web technology, particularly with regard to applications in e-commerce. Agents and the Semantic Web are made for each other. The Semantic Web provides an ideal nourishing environment for "softbots", software agents that can roam the Web, accessing knowledge from Web pages, exchanging knowledge with other agents, carrying out information retrieval (or should that be knowledge retrieval?) tasks or otherwise acting on behalf of their human or corporate masters.

As this discussion suggests, knowledge computing exercises a good deal of influence over the trajectory of knowledge management, something likely to persist into the future. This influence is currently so profound that the study of knowledge computing must be 'a given' in any valid knowledge management program of study. But what else do knowledge management practitioners need to know? Most commentators agree that the LIS and Computing disciplines have made contributions to the discipline of Knowledge Management, but they do not represent KM in its entirety. Given the fluidity of boundaries associated with KM, the wise course designer will flesh out the remainder of the curriculum via market research aimed at assessing demand and market preferences in course content.

The ECU KM Survey

Over the past nine months, we have been investigating the optimum design for a course in knowledge management at Edith Cowan University. During this time we have held focus group sessions with academics and industry practitioners and conducted research into what should be included in a relevant and useful course. This research has included the development and administration of a survey instrument that was distributed to practitioners in the library, information management, records management and computing industry sectors. The survey questionnaire was also published as a HTML/CGI form on the World Wide Web. We have also examined a range of courses in KM offered by other universities both in Australia and internationally.

On the basis of this research, we have developed a provisional model for a course that we believe will meet an identified need in the marketplace for study and teaching in this area. The remainder of this paper discusses the process of researching and developing the course structure and also identifies where we believe the Computing and LIS disciplines have a contribution to make to this study and teaching.

Survey instrument

The survey instrument was designed to measure preferences in terms of course content, course options (professional development, program of study in an existing award or dedicated award), industry demand for KM qualified personnel and attitudes toward knowledge management. The survey population comprised information technology professionals, librarians, records managers and fellow educators. Whether respondents were positively or negatively disposed towards KM was measured using a Likert scale. Statements focussed on three key dimensions of attitude toward KM, denoting expectations, identification or belonging and perceived value. Dimensions were operationalised with statements that invited respondents to say whether they:-

- regarded KM as durable;
- saw themselves as Knowledge Managers;
- could see career benefits in learning more about KM.

Limitations

At the time of writing, data gathering has not been completed. Updates of analysis outcomes will be posted on the survey web site (http://www.scis.ecu.edu.au/research/KM/survey.htm) as they become available. Other limitations concern the reliability of the Internet for market research. Well known sources of unreliability include the adoption of alternate personae by users and multiple submission. A useful account of the advantages and limitations of Internet market research can be found in Tanya Cheyne and Frank Ritter's (2001) *Targeting Audiences on the Internet.*

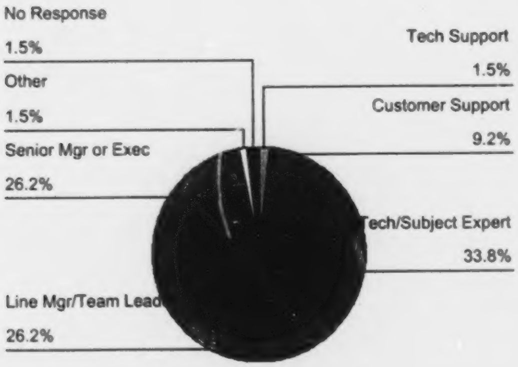
Data analysis

The following are provisional analysis outcomes based on analysis of survey data in SPSS.

Sample population characteristics

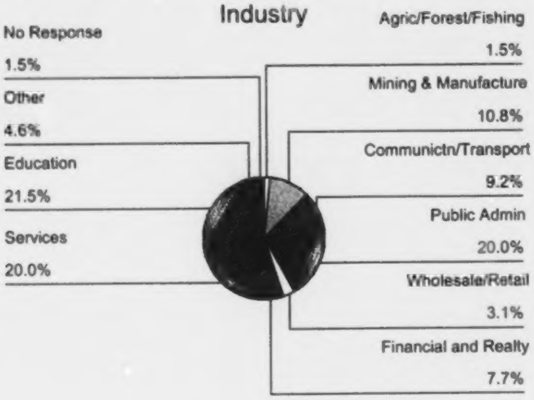
By position, the survey respondent population was weighted in favour of Technical or Subject Experts, Line Mgr/Team Leaders and Management:

Job Position

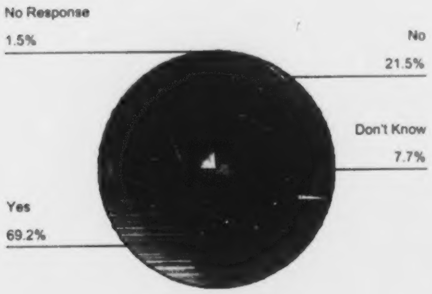


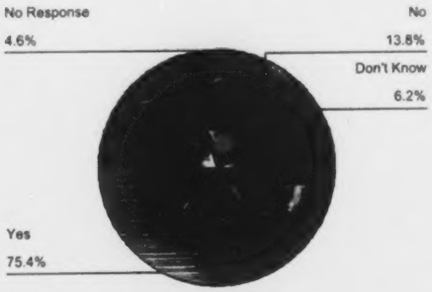
Distribution by industry/sector showed greater representation in education, services and public administration:

Industry



Knowledge management training needs (Course content)
Strong support was evident for knowledge management foundations (Knowledge Taxonomies, Knowledge Maps, Intellectual Capital and KM Roles)(69.2% 'Yes') and Knowledge Management in Practice (Organizational behaviour, Change management, Project Management, Teams) (75.4% 'Yes'). These results were anticipated.

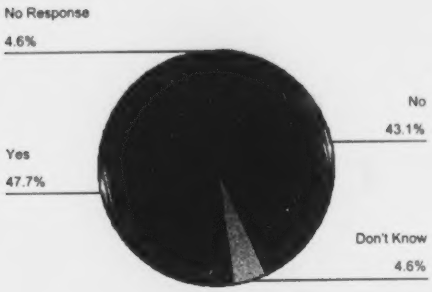

Knowledge Management Foundations

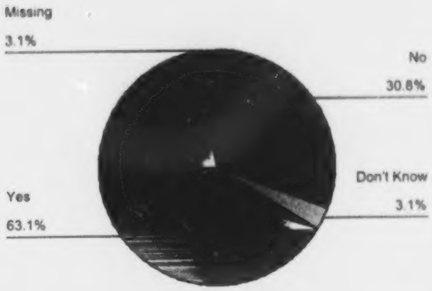

Knowledge Management in Practice

Trends in information technologies across the sample were more interesting. Distribution for and against Internet technology (49.2% 'Yes', 44.6% 'No') was approximately equal. Web application development (52.3% 'Yes', 41.5% 'No), Intranets/Extranets (52.3% 'Yes', 40.0% 'No') and Image Management (43.1% 'Yes', 35.4% 'No) all received strong support. Groupware and workflow was even more decisive (69.2% 'Yes', 18.5% 'No). A majority of respondents did not want Electronic Commerce (40.0% 'Yes', 44.6% 'No').

Knowledge-based systems
Decision support systems, Intelligent Systems and Agents and Artificial intelligence form recognized taxonomies of knowledge based systems. Measured support was highest for decision support systems (56.9% 'Yes', 26.2% 'No'), followed by intelligent systems and agents (47.7% 'Yes', 33.8% 'No) with artificial intelligence recording a somewhat ambivalent result (41.5% 'Yes', 38.5% 'No').

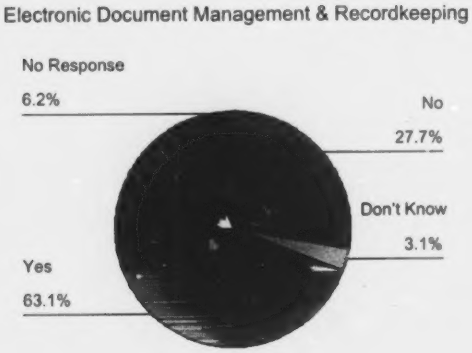
Database
Enthusiasm for data warehousing isn't evident in this sample with respondents for and against evenly divided (47.7%, 'Yes' 43.1% 'No'). Data mining and knowledge discovery were more popular with respondents (63.1% 'Yes', 30.8% 'No').

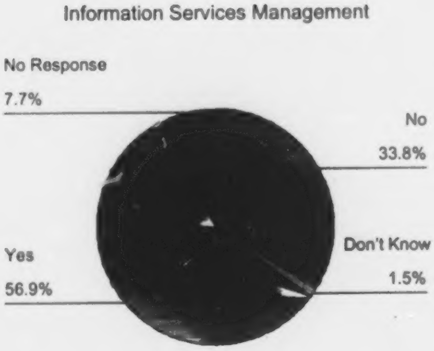

Data Warehousing


Data Mining and Knowledge Discovery

Information Science
Preferences for Information Organization, Information Retrieval, Electronic Document Management (grouped with Electronic Recordkeeping) and Information Services Management were tested. Ambivalence was observed with Information Organization (47.7% 'Yes', 41.5% 'No') and Information Retrieval (43.1% 'Yes',

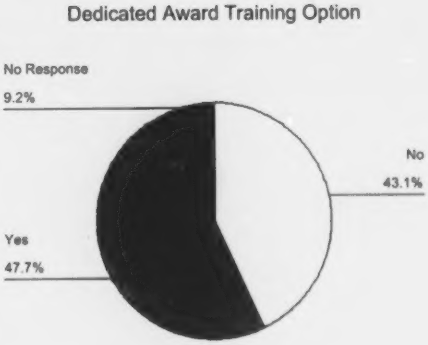
44.6% 'No'). Strong preference was shown for Electronic Document Management & Recordkeeping and also for Information Services Management:





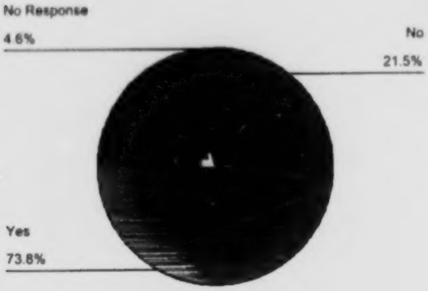
Course options

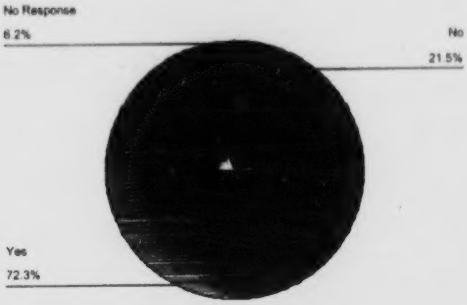
Far and away the most popular KM course option was the intensive short course (90.8% 'Yes', 6.2% 'No'). The majority of respondents voted against the idea of KM as a minor in another award program (43.3% 'Yes', 56.7% 'No). More support was evident for KM as an award program of study in its own right:



Employability

The data displayed a strong preference for employing KM trained personnel. A total of 75.4% of respondents said that they would consider employing a KM award graduate. Similar levels of support were measured across course of study and professional development (short course) trained personnel:


Course of Study Employment Option


Professional Development Employment Option

Attitudes toward KM

A panel of judges was used to weight statements on the Likert scale. A data subject sympathetic to knowledge management recorded a cumulative score across the scale greater than 0. Taken as a group, respondents were on the whole positively disposed toward KM (Mean= 0.91 Std Deviation= 0.62). A total of 87.7% of respondents regard the meaning of KM as unclear, a survey outcome containing an important message for the proponents of KM and how KM is being communicated to the industry. Echoing the positive sentiment across the sample, 65% of respondents thought that their careers would benefit from KM studies. More than half (55%) of respondents see themselves as a knowledge manager and 80% consider KM will be important in the future.

Interpretation

Data gathering and analysis has not yet been completed for the ECU KM survey. The number of respondents is currently too small and cross tabulation is required to provide a picture of market segmentation. The sample is disproportionately weighted towards information and computing professionals and therefore furnishes no guide to wider market preferences. Subject to these limitations what can be asserted about the market for KM courses?

Course Content preferences

In terms of course content preferences:

- Knowledge Computing is strong in the sample with Internet technologies, Knowledge based systems and database all recording strong levels of support. Groupware and workflow were strongly supported, with Intranets/Extranets and Web development receiving endorsement from a majority of respondents. Strong support was also shown for Electronic Document Management and Recordkeeping;
- There is strong support for the inclusion of Knowledge Management Foundations (Knowledge Taxonomies, Knowledge Maps, Intellectual Capital and KM Roles) and Knowledge Management Practice (Organizational behaviour, Change management, Project Management, Teams) in knowledge management training;
- Electronic commerce is not thought suitable for inclusion by a majority of respondents;
- In Information Science, respondents were ambivalent toward Information Organization (cataloguing, classification, indexing) and Information Retrieval.

Course delivery
Intensive short courses are strongly supported, with a small majority of respondents favouring a dedicated award. (A basic signal to would be course designers that flexibility is required in terms of exit points and course duration).

Employment
Strong support exists in the sample in terms of the employability of KM trained personnel across all three course of study options (professional development, minor studies and dedicated award).

Attitudes toward KM
This sample of information professionals (librarians, information technology professionals, records managers) is positively disposed toward KM- a result expected given the social desirability factor presumed to be at work in a population of information and computing professionals. Responses to data items concerning the durability of KM, perceptions of the significance of KM studies to career advancement and personal identification with KM are all very positive suggesting good market potential for KM studies. Around two thirds of respondents consider that their career would benefit from KM study and more than half see themselves as knowledge managers. Generalisability of this sentiment to the industry cannot yet be confirmed, but such indicators do suggest that the industry is embracing KM.

Towards a KM course model

Subject to the gathering of further data for a larger sample, data analysis suggests some basic parameters for course construction. In particular, our provisional post graduate studies model:-

- operationalises strong content preferences revealed in survey data in the program core and dispatches ambivalent outcomes to a stream/elective structure, allowing students flexibility in constructing their academic program;

- reflects the strong content preferences expressed in the survey for Knowledge Computing, Knowledge Management Foundations and Knowledge Management Practice; and

- allows for multiple exit points corresponding to award type and full time equivalent studies from one to three semesters in duration.

In our provisional model, the multi disciplinary character of KM is supported by a three stream elective structure based on the concepts of information use, information architecture and knowledge management with subjects drawn from ECU's School of Computer and Information Science, Communications and Multimedia and School of Management Information Systems.

Conclusion

The metaphor of KM as an 'unbounded universe' and too hard is not sustained by this study. A picture emerges of KM as multi disciplinary, but with some subject areas enjoying clear leadership in terms of market acceptance. In terms of this leadership, provisional conclusions point to the importance of Knowledge Computing, Knowledge Management Foundations and Knowledge Management Practice. Some familiar faces such as Groupware and Electronic Document Management are proving surprisingly durable. More recent arrivals to the KM technology stable such as data warehousing may not be fairing so well. Course designers hoping to leverage from linkages to Electronic Commerce, may wish to re-think this strategy, at least as far as this segment of the market is concerned. Similarly, course designers hoping to re-package mainstream LIS offerings into the more attractive KM brand should take note- Information Science subjects such as Information Organization and Information Retrieval may not appeal in this market place.

What can we say of the future of LIS in a KM centred world? Attitudes to KM in our research were positive suggesting that many information professionals regard KM as durable, see themselves involved in KM activities and can see career benefits in learning more about KM. Attitudinally, many information professionals have made the transition to a KM world. The market place dynamic in favour of knowledge computing, may get in the way for some, but LIS folk have adapted in the past to workplace transformation based on information technology. No crystal ball is required to see the role of libraries, both public and within organizations, evolving to become "knowledge centres", utilising many of the computer-based solutions mentioned above. Rather, it is an evolutionary trend in which appropriately qualified LIS and information technology professionals can play a central role.

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Knowledge management: opportunities for LIS graduates

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Abstract:

Market research has been undertaken in preparation for a new postgraduate programme in Information and Knowledge Management to be taught by the staff at the Department of Information Science at Loughborough University. The research was needed to shape the curriculum and to define programme parameters. Presented at the conference will be the findings of a study that investigated the availability and types of jobs in this field, the skills and types of personnel sought by employers and whether demand is currently being met in the UK. The study involved identifying and analysing national advertisements for Knowledge Managers over a six-month period and undertaking follow-up surveys involving the agencies and employers who placed the advertisements. Just how these results influenced the design and parameters of the programme will also presented. There is no doubt that new programmes, such as this, will open up considerable new employment opportunities for IS graduates.

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1. Introduction

Management information strategies and techniques for identifying, integrating and assimilating relevant information from both internal and external sources have been used for decades by successful businesses - so what is different now and why is the emphasis being placed on Knowledge Management (KM)?

The question 'what is different now' is easy to answer. Computers that were first introduced into businesses in the 1970s now bear little resemblance either in looks or in technological power to those being used today. A huge amount of information can now be assessed in seconds 'making more information more available to more people than at any other time in human history' (Feather, 1998). Managers face the paradox of having a greatly increased volume of both internal and external business information potentially available to them from which to make decisions but far less time to make them.

Coupled with this is drive of the internet economy, the move towards the global economy and global competitiveness and the need to be constantly up-to-date with product and competitor information. Thus the use of suitable techniques to manage this information is ever more important. Without them employees will undoubtedly suffer information overload with inevitable consequences for the success and profitability of an organisation (Edmunds and Morris, 2000).

Why has Knowledge Management suddenly become a buzz word? Until recently the fascination with the capacity of the memory and processing power of the computer has over shadowed the enormous potential offered by the memory capacity and processing power of the human brain. Only in the last few years have companies begun to realise the value of what is often referred to as 'intellectual capital'. It is now becoming increasingly common for large organisations to have a KM strategy as well as an information management strategy. But what exactly is Knowledge Management and how does it differ from Information Management? The main objective of KM is to create an integrated environment in which people are enabled to apply, develop, share, combine and consolidate *knowledge* about customers, products, markets, competitors, services, procedures and practices in order to maximise organisational success. Information Management, on the other hand, is defined as 'The application of management principles to the acquisition, organiszation, control, dissemination and use of *information* relevant to the effective operation of organizations of all kinds' (Feather and Sturges, 1997).

Research by TFPL (1999) identified skills needed for creating and sustaining a knowledge culture within international organisations. In-depth case studies in organisations that were already implementing knowledge management initiatives and analysis of UK job advertisements produced the following key findings:

- Organisations that promoted the information literacy skills of creating, finding, sharing and using information and knowledge amongst employees added 'value to innovation, problem solving, strategic planning and the business processes of the organisation' (TPFL, 1999).
- New combinations of skills and new roles and responsibilities are required when creating a knowledge environment.
- Core competencies required by employers are made up of educational, professional and technical background and experience.
- The KM competency framework changes from an initial focus on change management to an emphasis on improving the knowledge process itself as the knowledge culture within an organisation matures.
- There is a need for courses to develop the technical skills required to embed knowledge processes within organisations, to promote business understanding among information professionals, and to facilitate other key skills needed in KM environments.

Since Information and Knowledge Management are inextricably linked it is not surprising that schools of Library and Information Science (LIS) are taking an active interest in meeting the demand for suitable courses. The Department of Information Science at Loughborough University is no exception. October 2002, for example, will see the start of new Masters Programme in Information and Knowledge Management (subject to approval). The TPFL research formed a basis for the early preparation for the programme. However, since the research was some 18 months old in a fast moving area a small-scale supplementary study was undertaken. The main objective of this, besides up-dating the TPFL research, was to assess market demand and to identify the skills required by employers in the KM field. This paper describes this research and its findings and discusses how it influenced the design of the Masters programme in Information and Knowledge Management in the UK.

2. Methodology

The research involved three stages.

2.1 Identification and analysis of job advertisements

A large number of UK newspapers (all non-tabloid daily and Sunday newspapers), journals and websites were scanned for job advertisements in the KM field between October 2000 and March 2001 inclusive. A job was considered to be in the KM field if the word 'knowledge' was included in the job title or if the job description showed the job to be concerned principally with the identification, capture and networking of internal sources of expertise, knowledge and information. Where possible the following information from each advertisement was extracted and recorded in Excel: Job title, role and job description; Skill and experience required including: Personality traits sought; KM skills demanded; LIS skills required; IT skills required; Sector of organisation; Salaries offered; and Geographical location.

2.2 A follow-up survey of employers

Employers who advertised directly, and not through an agency, were interviewed by telephone or sent a questionnaire via email. The intention was to collect information about the number of people who had applied for the post and were interviewed; the approximate number of candidates who had the appropriate skills and experience; whether they appointed anyone and, if they did, whether the successful candidate possessed the right skill mix; and if they used tactics other than advertising to procure personnel.

2.3 A follow-up survey of agencies

All the recruitment agencies who sought KM personnel in the six-month period were sent a questionnaire via e-mail. The information requested included: the number of KM staff they were asked to recruit over a period of one year; whether they had sufficient candidates on file to fill posts; whether the response to their first advertisement generally yielded sufficient candidates; how often they resorted to head hunting; what skills were required and what were missing from candidates; and whether they saw the market growing.

3. The vacant posts

3.1 The number of posts available

Some 134 job advertisements were placed in newspapers or journals or offered by agencies on their websites in the time period. This represented a minimum of 113 posts; some advertisements occurred more than once in different sources, but several advertisements were trawling for an unspecified number of 'Knowledge Managers'. This was particularly true in the case of agency advertisements, which comprised some 77% of the total. If the questionnaire survey or telephone contact did not yield any more specific data these types of advertisements were regarded as representing one post. Consequently, the number of posts actually advertised could be higher than 113. As expected, the job market in the KM field has expanded since TFPL undertook their survey 18 months ago, when 80 job advertisements were found over a similar time period.

Some of the questions directed to the recruitment agencies were also designed to elicit information about market demand. Agencies were asked, for example, how many KM posts they were asked to recruit in a year and if they generally had sufficient candidates on file to fill posts. Of the eight agencies that responded one said they were asked to recruit 'hundreds' but most of the others said between 10 - 30 a year. Although most of the agencies said that they didn't always have sufficient candidates on file nearly all of them said they managed to find enough suitable candidates from the first advertisement or else used the practice of 'headhunting'. Generally an appointment was made from the candidates put forward by the agencies to their clients. Almost of the agencies said that they thought the market was growing; one said substantially.

Further evidence of market demand was sought from employers who placed job advertisements. Of the seven employers interviewed, two did not receive any applications for their posts, one received 14 and the remaining had between three and eight applications. Because of the lack of suitable applicants only four of the seven posts were filled. It is difficult to say exactly why the advertisements produced so few applicants but all of the posts offered salaries at the lower end of the spectrum, £18,450 - £31,000, suggesting they were more junior posts. It would appear, therefore, that the UK market for KM roles is still relatively small, but is growing.

3.2 Job title, role and job description

Roles in the KM sector are wide ranging with many different job titles being identified. To enable comparisons to be made, the generic classification of roles used by TPFL (1999) was adopted. Job descriptions were used to classify the roles rather than job title.

Chief Knowledge Officer. A person in this role would be the Senior Executive of the initial strategy team who assess the potential of KM within their organisation, act as champions and is responsible for strategy, leadership and co-ordination. Job titles found in the advertisements that fell into this category were 'Chief Information Officer', Director of Knowledge Management' and 'Director of Strategic Intelligence'.

Chief Knowledge Team Manager. This type of person would be regarded as Senior Management with responsibility for KM development and training, strategy, IT infrastructure, business processes, change management and so on. Job titles alluding to this role in the advertisements included 'Knowledge Manager', 'Knowledge Leader', 'European Knowledge Manager' and 'Head of Knowledge and Information Management'.

Implementation Manager. This type of person would be regarded as Senior/Middle Management and be part of a team required to take responsibility for KM implementation and monitoring and overseeing the development of processes, infrastructure and information resources. The most common job title found in the advertisements for this role was 'Knowledge Manager'. However, a variety of other titles were also used: 'Change Knowledge Manager', 'Knowledge/Intranet Manager', 'Knowledge Portal Co-ordinator', 'Global Exploitation Manager', 'Knowledge Interrogator' and 'Head of Delivery - KM'.

Knowledge Centre - Based Employee. Staff with this role would primarily work in centralised knowledge centres within the organisations and act as a focal point for knowledge initiatives. They would be responsible for facilitating acquisition, dissemination and access to internal and external information and knowledge sources. Typical job titles found for this type of role were: 'Knowledge Manager or Co-ordinator', 'Knowledge Assistant or Officer', 'E-librarian', 'Information Specialist', 'Intranet Content Manager', and 'Knowledge Analyst'.

Knowledge Networker. A person with this role would be responsible for facilitating KM activities within a specific network and community and may be required to abstract, synthesise current or new industry, subject or client knowledge. Again the term 'Knowledge Manager' was frequently used for this type of role. Other job titles found were: 'Knowledge Analyst', 'Knowledge Engineer', 'Competitive Intelligence Officer' and 'Network Co-ordinator'.

Business Unit - Based Employee. A person with this type of role would work in self-contained units with specific functions such as marketing and would be responsible for facilitating the development and implementation of KM activities with the help of the implementation team in their unit. 'Knowledge Manager or Officer' was a common job title found in the advertisements. Other terms used included: 'Business Intelligence Manager', 'Primary Care Knowledge Manager', 'Knowledge Interrogator', and 'PMKS Practice Manager'.

Over three-quarters of the posts, 89, had sufficient details in the advertisement to categorise them into the generic roles as detailed above (see Table 1). The results showed that almost half of the jobs advertised could be regarded as more 'junior' posts and may be suitable for new graduates or people with one or two years experience.

Table 1 Number of jobs for different types of roles

Generic role	No of jobs	% of jobs
Chief Knowledge Officer	4	5
Chief Knowledge Team Manager	5	6
Implementation Manager	28	31
Knowledge Centre - Based	33	37
Employee	9	10
Knowledge Networker	10	11
Business Unit - Based Employee	**89**	**100**
Total		

3.3 Skills, competence and experience required

What key skills, competence and experience are considered important by prospective employers in the knowledge management field? The short answer to this is that they vary between post to post. In broad terms, however, they can be divided into six main groups: Experience and general skills, Educational requirements, Personal attributes, Knowledge management skills, LIS/IM skills, IT skills.

3.3.1 Experience and general skills

A large number of the advertisements, particularly in the commercial sector, specified that some experience, or extensive experience in the case of top senior management posts, was desirable (see list below). In 27 of the 113 posts the employer wanted relevant industry experience while others specified the need for marketing experience and/or strategic planning experience. Not surprisingly the need for interpersonal and good communication skills, such as presentation and report writing skills were mentioned in many advertisements. Other common required skills included those associated with project management, being a team player, and the ability to facilitate change management. These findings were similar to those obtained by TFPL, and echoed by the agencies and employers interviewed.

Ranked list of experience and general skills (more than five occurrences):

1. Relevant industrial experience
2. Interpersonal skills
3. Highly developed oral/written communication skills
4. Project management skills
5. Team player
6. Change management
7. Analytical skills
8. Ability to work to strict deadlines/prioritisation skills
9. People management
10. Training skills
11. Negotiating skills

3.3.2 Educational requirements

Approximately a quarter of the advertisements specifically stated that a first degree was required, although several mentioned such phases as 'sound educational background' or 'highly educated'. Interestingly, the degrees of primary interest to employers were those in an information or library related subject, which did not appear to be the case in the TFPL study. Does this mean that employers are at last waking up to the fact that the LIS profession has much to offer in the KM field? Comments from agencies seem to bear this out. It is generally thought that the easiest new graduates to place are those from a course with an electronic content (databases, intranet, online skills) and those including modern management skills - which are included in most LIS programmes today. One agency said that 'for an SME or even some of the blue chips, a KM appointment is often the first information professional that is brought into the business, so skills in managing information as well as knowledge are often thought as revolutionary'. Another said that '..organisations may not realise that a KM person is likely to be drawn from an LIS background'.

3.3.3 Personal attributes

Many personality attributes were mentioned in the job adverts as being desirable. However, the most common ones in order of frequency of occurrence were: Proactive self starter; Enthusiastic; Highly motivated; Innovative; Leadership ability; and Dynamic.

The trait 'proactive self starter' was top of TFPL personal attributes list too, but the other attributes mentioned were slightly different. For example, they found employers were looking for people who were flexible/co-operative, persuasive, tactful and creative. The agencies stressed that they were looking for flexible and adaptable candidates.

3.3.4 Knowledge management skills

Like the TFPL findings many of the job advertisements expressed the need for candidates to have practical experience in knowledge management or awareness of the importance of knowledge to the development of an organisation. Experience of using KM development tools was also considered to be important.

3.3.5 LIS/IM skills/experience

Many of the skills listed in the advertisements were LIS related. The most demanded in rank order were: Ability to develop the knowledge transfer/capture process; Information Management experience; Research skills; Ability to access/source external information resources; Content management skills; Classification, cataloguing, codification, taxonomy skills; Online searching skills (Dialog.CDRoms/Profound/RBB/FT Profile/Investext); and x-years experience in a research or information role.

The findings show that a broad range of LIS/IM skills are sought by employers. This is in contrast with the TFPL study which identified online searching as the skill most commonly sought.

3.3.6 IT skills

The most demanded IT skills specified in job advertisements and by agencies were those needed for intranet development, internet use, use of Lotus Notes and for database management. A few advertisements merely specified the need for a solid technical background in IT, and/or experience of Microsoft Office, Word or Powerpoint. The most interesting finding here in comparison to the TFPL study is the rise of importance of intranet development skills.

3.4 Sector of organisation

In total, 97 of the 113 posts could be identified with a particular industrial sector. As Table 2 shows almost a half of these (49%) were being sought by either consultancy companies or the finance sector. The only other sectors to advertise more than three posts in the six-month period were IT/Communications, the NHS and the Government. In the TPFL survey, the majority of the job vacancies were from Management/Business Consultancy companies; two thirds of the posts were being offered by this particular sector. The only other sectors in the TPFL survey to have more than three posts were the legal and finance sectors.

Table 2 Industry sectors

Sector	**No of posts**
Consultancy	29
Finance and Legal	19
IT/Communications	10
Health Services	8
Government	6
Professional Body/Services	5
E-commerce	3
Energy	2
Distribution	2
Media	2
Recruitment	2
University	2
Other	7
NK	16
Total	**113**

3.5 Salaries offered

Graduates are often attracted to particular fields in the first instance by the salaries that are offered. Table 3 shows the range and frequency of salaries on offer as given in the job advertisements. Only four posts were advertised below £20,000, the lowest salary on offer being £17,000. Three of these mentioned the need for professional qualification in librarianship or information science. At the top end two posts were advertised as offering £100,000. These were for very high level appointments, one to provide leadership and vision in the field of information services to take advantage of e-commerce, the other to have overall responsibility for KM, strategic management and knowledge delivery in the finance sector. Almost a third of the advertisements did not state a salary; just said 'excellent salary offered' or 'very competitive salary offered' or that it was negotiable. Where salaries were stated, the most common salaries on offer were between £20,000 - £45,000. KM salaries therefore appear to be higher that equivalent library posts.

Distribution of salary on offer was fairly even across sectors, although the Health Service jobs were among the lowest, with 7 of the 8 posts being offered with salaries of £20,000 - £30,000.

Table 3 Salaries

Salary	Number of posts
<20,000	3
£20,001 - £30,000	34
£30,001 - £45,000	27
£45,001 - £65,00	13
>£65,000	2
Negotiable/Not known	34
Total	**113**

3.6 Geographical location

Graduates are also interested in the location of jobs. In the UK almost all of the KM jobs advertised (81%) were based in London with a further 13% being based in outer London or Southern England. Only 5% of jobs were based elsewhere: one in consultancy, one in the leisure sector, two in health and one in distribution. No KM jobs were on offer in Scotland or Wales.

4. Information and Knowledge Management Masters

The results from the survey and the earlier TFPL research provided the framework for the design of the new Information and Knowledge Management Masters Programme at Loughborough University. Commencing in October 2002, subject to approval, students will be able to take a series of modules aimed at providing them with the necessary skills for a career in KM. The structure is based on a semester system with six modules worth 10 credits being taken in each Semester. Students will also be required to write a dissertation, worth 60 credits during the summer months. The core modules are as follows:

Design and Authoring for the WWW
Information Retrieval
Informatics and Knowledge Management systems
Principles of Knowledge Management
Organisation of Information
Database Structure and Design
Competitor Intelligence & Business Information
Legal and Professional Issues
Management of Innovation & Entrepreneurship
Management Techniques & People Skills

In addition to the core modules students will be required to select options worth 20 credits and undertake a Research Methodology course in preparation for their dissertation. Further details about the programme will be available from October 2001 at http://www.lboro.ac.uk/departments/ls/.

5. Conclusions

Knowledge Management is linked to Information Management because knowledge is communicated and managed through information infrastructures that are used to locate, create, distribute, store and eventually discard information. Focusing more on utilising intellectual capital within organisations, KM is nevertheless, a distinct discipline and one that is growing, substantially according to one agency. Information professionals already have the essential theoretical and practical skills to provide the IM element of KM. However, there are also opportunities for information professionals to use their skills in creative and imaginative ways to influence information strategies at boardroom level and corporate decision making. Up until now, employers have been slow to recognise that information professionals could have the potential to move into senior management positions. Abell and Oxbrow (2001) blame lack of expectations on the part of the both the information professional and the employer for this. They point out that employers tend to perceive information professionals as backroom office workers who provide services to real managers. Although employers recognise that information professionals have valuable skills, employers, according to Abell and Oxbrow, perceive them to have a lack of business acumen, and poor management/leadership/team skills. There are signs that employers' perceptions are changing, judging from the increasing number of advertisements for KM posts stipulating the desirability of an LIS/Information Science degree, but expectations on both sides still need to improve. Graduates also need to be provided with the right skill mix of management, business, ICT and information skills, to enable them to take advantage of the emerging roles in the knowledge economy. The new Masters degree in Information and Knowledge Management at Loughborough University aims to do just that. The future is exciting; it has never looked so promising for information professionals. The opportunities are there and are expanding; these must be taken, if not, they will go to other disciplines.

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DIVA - the digital video and audio archive of the University Library of Karlsruhe

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Overview:

1. Introduction
2. Launching a project
3. Relevant challenges
4. Implementing DIVA
5. Copyright
6. Contents
7. Indexing and access
8. Conclusions

1. Introduction

In May 2000 the University Library of Karlsruhe released its digital video and audio archive DIVA[1]. Since then the students and researchers of the Karlsruhe University have benefited from a broad spectrum of digital video and audio files. DIVA contains multimedia documents of various subjects which can all be reached at any time over the internet and directly viewed on the personal workplace.

Why did a traditional university library build a digital video and audio archive? Let me first say a few words about our university to understand our motivations:

The Fridericiana Technical University[2] is a modern campus university in the center of Karlsruhe, situated in the Upper Rhine Valley. Founded in 1825, it is the oldest technical university in Germany and has a longstanding tradition in engineering and natural sciences. Today it comprises 12 faculties and current statistics show that Karlsruhe has about 15.000 students enrolled and a staff of about 4.000 people including 300 professors, who work in teaching, research and administration.

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[1] http://www.ubka.uni-karlsruhe.de/diva
[2] http://www.uni-karlsruhe.de/Uni/

The library is - in conjunction with the computer center - one of the central service departments of the university. It holds a collection of about 900.000 volumes and subscriptions for nearly 3000 journals most of them dealing with engineering and science.

As a technical university the Fridericiana is equipped with a highly developed communication infrastructure. Therefore it may not be surprising that the university library also offers a wide range of internet-based services. We were one of the first German university libraries who early on in the 90ths had their own web opac.

The ongoing extension of our electronic services also lead to the development of the well-known Karlsruhe Virtual Catalog[3]. It is a meta search interface to library catalogs that simultaneously searches all German union catalogs plus several major libraries abroad such as the Library of Congress, and retrieves a standardized hit list for the user. Since the Karlsruhe Virtual Catalog is such an unique source of bibliographic information for document delivery and cataloging, users external to the university use it very extensively, and at about 1 million hits per month are registered. The range of our electronic services also comprises document delivery services and various electronic full-text archives[4].

In view of the great expansion of the internet and the increasing possibilities of digital video, our aim was to establish our own digital video archive DIVA in order to extend our electronic services for the university.

An additional factor contributing to this was that the Karlsruhe University is more and more becoming a virtual university. There are several projects in the work area of the virtual university financed by the federal state Baden-Württemberg[5]. Karlsruhe University forms part of some of these[6]. As a direct consequence of these projects, our students benefit from the first multimedia learn modules in various subjects. It is our job as a central service provider to support the further developments of the university. Therefore we became involved in the handling of multimedia documents.

Today we supply our university not only with electronic full-text information but also with digitized video and audio files. Using these digitized media resources, our students and staff are able to create their own interactive multimedia documents where several different electronic media can be integrated via hyperlinks.

2. Launching a project

We wouldn´t have been able to launch such an endeavor without financial and personal support from the federal state government. Here we will explain some of the project settings to give an idea of the background of our digital video and audio archive.

Our library participates in the "Zukunftsoffensive Junge Generation"[7] ("Initiative for the future of the young generation") which is an extensive initative by the regional government in the federal state Baden-Württemberg since 1997 in order to support the future development of information and communication technologies. The projects under this umbrella range from education, media to science and infrastructure topics. More than 40 million DM have been allocated for the modernization of libraries. For this case the Ministry of Science, Research and Art in Baden-Württemberg launched a

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[3] http://www.ubka.uni-karlsruhe.de/kvk.html

[4] for example EVA http://www.ubka.uni-karlsruhe.de/eva/index.html; KVVK http://www.ubka.uni-karlsruhe.de/kvvk.html or LEA http://lea.ubka.uni-karlsruhe.de/lea/.

[5] http://www.virtuelle-hochschule.de

[6] for example: http://www.viror.de or http://www.vikar.de

[7] http://www.baden-wuerttemberg.de/zukunftsoffensive/

Multimedia working group of which we are a member[8]. This Multimedia working group consists of 2 computer centers in Tübingen and Ulm, the library service center of Baden-Württemberg (BSZ) in Konstanz and the University Library of Karlsruhe.

The aim of the Multimedia working group is the promotion of the use and offer of multimedia documents in the libraries of Baden-Württemberg.

The Project we introduced into the Multimedia working group was called "enhancement of the usage of audiovisual resources through digitization".

Important aims of our project were the digitization of analogue video tapes and deciding upon the best delivery methods for those digital assets over the internet. A major advantage of the digitization process is that the materials become more easily accessible. Researchers and students are now able to receive them directly to their desktop. Additionally another advantage lays in the possibility for several users to view digital videos simultaneously.

We also wanted to evaluate whether the new technologies in the field of digital video could cope with the typical deterioration of analogue media: the analogue video tapes in many libraries are constantly decaying as they suffer from constant usage. Each copy or play-back deteriorates the original, while in digitized form the master does not suffer any adverse effects, no matter how many copies are taken nor how heavy its usage.
By means of digitizing the video tapes we therefore wanted to find global solutions for the archiving problems of the variety of different analogue video and film standards.

With the product of our efforts and the knowledge gained, we set out to establish our own digital video service.

3. Relevant challenges

The implementation of our project has presented us with a variety of challenges.

3.1. Technical challenges

As mentioned before, our aim was the delivery of the digital video over the internet directly to the computer of the end-user. This involved a lot of questions:

- we do not know the internet connection speed of our end-user, but the availability of sufficient bandwidth is one of the crucial questions in the field of digital video transfer,
- we neither know the configuration nor the power of the user´s computer and accordingly whether or not they can play multimedia files,
- we do not know what operating system or plug-ins are installed,
- another issue is the choice of the digital video formatting; will their quality standards be sufficient and thus be accepted by the students and staff of the university?
- Digital videos means dealing with huge amounts of data; how can we handle them? Which archival system do we need?

3.2. Organizational challenges

In the history of libraries, new media has never completly usurped conventional media. That is to say that by the integration of digital video in the library routine we have to do some reorganisation. We also have to instruct colleagues with the new media and build new and efficient processing procedures.

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[8] http://www.bsz-bw.de/diglib/agmm/agmm.html

A key aspect is the indexing of the digital videos and their integration in the library catalogs and the local opac. Yet from the beginning of the project it was obvious that we wanted to benefit from the results of another working group also financed by Baden-Württemberg. The project "Baden-Württemberg Digital Library" established a data model for multimedia objects and we hoped to apply this data model.

3.3. Copyright challenges

Many digital services have to cope with copyright law restrictions as digitization is reproduction and reproduction is regulated. In recent years one could observe that international and national copyright regulations have become weighted in favor of the authors' rights. In DIVA, we adhere to the German copyright law from 1965, recently modified on September 1st, 2000.

4. Implementing DIVA

4.1. Streaming Media Technology

For the delivery of our digitized video and audio files, we chose to use streaming media technology. Streaming media is a relatively new technology, which began to develop approximately five years ago. The basic idea is to transport video and audio content as a constant data stream over an Internet connection from a so-called streaming server to a remote computer of a user who can view the video content in near real-time using a special player application.

After clicking a link on a web page, a suitable player application opens on the user's PC and requests the video content from the streaming server, which sends the content as a constant data stream to the player. This data stream is immediately used to render the video clip. No download of the entire video file is necessary. (All player applications offer VCR-like control buttons which enable the user to navigate within the video).

On the server side, the streaming server software handles the player requests and sends the video content as data streams to the requesting player applications. Today, server and player software compose a closed, proprietary system.

The representation of moving images on a remote computer screen requires a large amount of information to be sent over the network connection within short periods of time. Technically, such a data stream is characterized by the number of bits transferred per second, e.g. 1 Megabit per second (1 Mbps). This is the central parameter in streaming media technologies as it is closely related to the image quality of the video clip: The more detail visible in a video clip, the more information has to be transferred per unit of time to achieve a smooth play-back .

Before a video can be sent from a streaming server over the network it needs to be encoded into a digital video format. The first step in this process is to digitize analogue video recordings using video grabber cards. This analog to digital transition yields very large computer files, especially when the video is captured in a "frame-accurate" way, i.e. when all 25 frames in one second of a video are coded as individual digital images. In this case, one second of PAL[9] video will yield 31.6 Mbytes of data (768 x 576 x 3 x 25 Bytes), which is more than today's computers and networks can handle. Therefore, it is necessary to drastically reduce the data volume, which can be done for instance by reducing the resolution and the frame rate of the digital video clip. Rendering the PAL video in a resolution of 352 x 288 Pixels and at a frame rate of 15 frames per second already reduces the amount of data by more than 85 percent.

In a second step, the frame-accurate files are used as the input for the encoder software that finally produces the streaming video files. Encoding through software is generally a slow process. It can take up to 20 minutes to encode one minute of video, and this can be a bottleneck when a video archive is planned to grow rapidly.

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[9] PAL: Phase Alternating Line (television system used in most European countries)

The success of a digital video archive using streaming media technologies depends on the ease of use of such a service and its accessibility to the broadest possible range of users. This requirement conflicts with the current situation found on the streaming media technology market where all the major software manufacturers have recognized how lucrative streaming media services in the entertainment sector are likely to be. All manufacturers therefore compete against each other in order to win the largest market share. Today, different streaming systems such as RealVideo, Quicktime and Windows Media, coexist and are best supported on the companies' preferred operating systems. However, no effort is made to develop universal solutions, capable of running on all operating systems (e.g. a universal player that supports all streaming systems and all user platforms).

4.2. Planning a digital video archive

Planning a digital video archive meant that we had to take into account a broad range of possible users who may access the digital video archive using different operating systems and a broad range of Internet access technologies, from slow modem to high-speed local area networks connections.

4.2.1. Operating System of the user PC

While the IT environment in companies is generally homogeneous and centrally administered, at universities it is much more diverse and not centrally administered. Students frequently prefer Linux as operating system for their personal computers, and research projects are often carried out on workstations running a professional version of Unix like Solaris, AIX or Irix. In some departments, Apple Macintosh computers are used, while many others generally use Microsoft's Windows operating system.
In view of this analysis, the digital video archive at the university of Karlsruhe offers video content in all popular video streaming formats: Realvideo, Quicktime and Windows Media.

The Realvideo streaming format from RealNetworks offers the broadest support of different operating systems. Apart from the Windows platform, players are available for the MacOS as well as for different flavors of Unix, like Linux and Solaris. Realvideo therefore fits best our requirement to support a large number of platforms.

Quicktime is Apple's multimedia architecture. It offers much more than only streaming video services. It is the native streaming system for Apple computers, but a player software is also available for the Windows platform.

Windows Media is Microsoft's streaming video technology. A player is available for all 32-bit versions of the Windows operating systems, however it is not pre-installed on the older versions like Windows 95, 98 and Windows NT. Recently, a player software for the Macintosh has been made available.

Additionally, our digital video archive allows users to receive MPEG videos from an IBM VideoCharger streaming server. This additional system is currently being evaluated as it fits into a much larger context, the IBM Content Manager software, which would enable us to build large-scale electronic document management systems.

4.2.2. Internet Connection

Another result of our analysis is that the video content has to be offered in two versions for delivery over slow and fast network links.

In Germany, most of the home users are still connected to the Internet over telephone lines, using a modem or an ISDN[10] card while the workplaces in public organizations and companies are connected to at least a 10 Mbps local area network (LAN[11]). This situation splits the possible audience into two groups: those who are able to receive less than approximately 64 kbits of data per second and those who can potentially receive data streams in excess of 1 Mbit per second (see table 1).

Connection Types	Required Bitrates	Video Resolution	Connection Technology
low bandwidth	40 - 128 kbit/sec	176 x 144	Modem, ISDN, Dual ISDN
high bandwidth	500 - 1300 kbit/sec	352 x 288	DSL[12], WAN[13], LAN 10/100 Mpbs

Additionally, RealVideo and Windows Media Technologies offer features called "SureStream" or "Intelligent Streaming" which promise to cope with the problem of network congestion.

4.3. Production / Workflow

Our streaming media files are produced on two Apple PowerMacs, each equipped with a video grabber card from Media 100[14]. Each card has a different function. One card encodes analogue video in real-time into MPEG-1[15] and MPEG-2 files while the other one produces video files in M-JPEG[16], the frame-accurate format already mentioned in one of the preceding paragraphs. The cards can be connected to a studio video cassette recorder or a DV[17] camcorder. This set-up allows us to capture content from VHS, S-VHS and mini DV cassettes.

In the current configuration, the PowerMac-based encoding station produces all desired formats of streaming video. The PowerMacs have installed Terran Media Cleaner and Adobe Premiere.

Once the encoding into streaming video formats is complete, all files including the MPEG-1 and MPEG-2 files are transferred to a Linux server providing Windows Network Services (SAMBA). This server can also be accessed by the librarian who carries out the indexing work using the DLmeta data model (see next section). Once the indexing is complete, the media files are transferred to an IBM TSM server for long-term storage, along with the metadata file. The streaming media files are also transferred to the streaming servers where they are ready to be delivered to a user.

MPEG-2 is our archiving format, as it supports the full TV resolution and presents the best compromise between image quality and file size. Also, chances are that this format is still up-to-date in 10 or 20 years, as MPEG-2 is the standard used in digital TV in the next decades. It will be used to re-produce our content whenever new streaming media formats replace the currently existing ones.

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[10] ISDN: Integrated Services Digital Network (digital telephone network) transmission of data at 64 kbps (kilobit per second)

[11] LAN: Local Area Network

[12] DSL: Digital Subscriber Line. Data transmission technique which uses the conventional telephone line for data transmission of up to 2 Mbps (Megabit per second)

[13] WAN: Wide Area Network

[14] http://www.media100.com, http://www.wiredinc.com

[15] MPEG: Moving Pictures Expert Group. MPEG-1 and MPEG-2 define two different versions of this digital video standard. MPEG-2 is the standard for digital television, while MPEG-1 describes an earlier version of this standard.

[16] M-JPEG: "Motion"-JPEG

[17] DV: Digital Video

4.4. Streaming Servers

The University Library of Karlsruhe runs three different streaming servers as every streaming media format requires its own video streaming server. Currently, we use an IBM F-50 Enterprise Server with IBM VideoCharger software to stream MPEG-1 videos, a Linux Server for Quicktime and RealVideo streaming and a Windows NT server running Windows Media Services 4 for streaming of the Windows Media files. All servers are connected to a 100 Mbps FastEthernet switch, which in turn is directly connected to the 622 Mbps ATM campus backbone. This configuration would theoretically support up to 60 MPEG-1 streams or approx 180 RealVideo streams at 550 kbits/sec.

5. Copyright restrictions

Solving most of the technical challenges for DIVA was achieved in the first year. What remained for us to overcome were the immense copyright restrictions that had to be dealt with.

The German copyright law regulates in § 53 the reproduction of documents for private und other non-commercial usage . Passage 2, phrase 1 stipulates that it is permitted to reproduce a document, for personal scientific use, if and as far as duplication is necessary for this purpose.

We have interpreted the law to mean that we may offer parts of the protected contents in DIVA only for members of the University. In that way we can guarantee the scientific and non-commercial use of the digitized videos. This approach is relevant to certain scientific television broadcasts, these are recorded and digitized and subsequently presented in DIVA exclusively for campus users. On a technical level, the user's access is managed via their computer's IP address.

As for commercial videos, we have to buy a digitization license from their publisher. These videos are then made available on the aforementioned restricted basis only for campus use. We have bought some of these licenses and are still in negotiation with other publishers. It is fair to say that the publishers themselves very often are confronted with such requests for the first time, which means that they are as new to this process as we are.

Because of these severe copyright restrictions, we would like to increase the number of material produced by university members themselves. In order to do this, we hope that the local multimedia and video production is going to intensify.

6. Contents

DIVA presently consists of nearly 200 hours of digital videos in different video formats. Our main focus is on content related to the university and its lessons and curriculum.

We started DIVA with content from the university TV station and later added the campus radio-broadcast. Both are produced by the university itself, and each month new material is added from the arenas of research and teaching as well as campus life.
In addition, the University and the library itself have produced their own films which are made accessible through DIVA.

DIVA also contains digital videos on different topics such as physics, mathematics, science and history. At the beginning of the video service, our most frequently requested video was a recording from a very famous children's television show "the show with the mouse". This TV show explained in a delightful manner how the internet works. Even computer science professors use this recording for illustration purposes during their lectures.

In the last months our focus has turned to course-related multimedia materials. These are directly connected with the courses at our university.

Here the students can access the university 's first online classes. DIVA publishes some introductory courses of the computer science department. The students can also view the online lecture again on their computer at home, independent of time and place. The class is broadcast via an electronic whiteboard and directly recorded in Windows Media Format.

We have also started to support several professors by providing multimedia repositories of information which are used throughout the semester. Students accessing this repository can find audio-visual files which provide a basis for their lectures. Thanks to DIVA they can do this in the comfort of their own homes, or from the computer labs of the university.

Some departments of the university use DIVA as a publishing platform for their own multimedia productions. As an example, the students of the architecture department produce more and more frequently audio-visual projects which they then make accessible through DIVA. However, this capability of DIVA is still in its infancy and heavily depends on the growing awareness of the new service in the University.

For this reason, the library is pursuing an active marketing campaign and is seeking contact with the producers of multi-media documentation at the university. During the selection and recording of materials for DIVA the need for librarian skills become apparent.

7. Indexing and access to DIVA

The last part of this paper outlines the data model which is used to index the video and audio content offered in our digital video and audio archive. DLmeta is the result of the "Digital Library Baden-Württemberg" project[18], whose aim was to evaluate the IBM Content Manager software suite, formerly known as "IBM DB2 Digital Library". The University Library of Karlsruhe was involved in this project along with the Library Service Center (BSZ) in Konstanz and the computing centers of the Universities of Tübingen, Ulm and Karlsruhe.

One of the central tasks in this project was the definition of a data model which allowed the description of electronic objects stored in the Digital Library. The Dublin Core Metadata Element Set served as a basis for this model. A final version, which had to reflect to some extent the particular architecture of the IBM DB2 Digital Library was adopted at the end of 1998 after intensive discussions between the IT experts and the librarians in the project.

At the end of this project, the idea emerged to re-formulate the "Digital Library" (DL) project´s data model into an XML Document Type Definition[19], taking into account the latest Dublin Core Metadata Initiative (DCMI[20]) recommendations on the Dublin Core Metadata Element Set (DCMES 1.1) and Dublin Core Qualifiers. The aim was to use this model for future multimedia projects.

Today, the "DLmeta initiative"[21] aims to establish this data model as a standard for metadata of multimedia objects in Baden-Württemberg and beyond. The non-commercial use in the research and higher education sector is permitted and welcome. Interested parties can find the complete technical documentation at the DLmeta web site (in German only).

Due to the general nature of the data model, the possible audiences are libraries, archives and museums, or any other organizations dealing with multimedia objects and metadata.

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[18] http://www.ubka.uni-karlsruhe.de/allg/projekte/dlbw/index.html, http://www.bsz-bw.de/diglib/ibmdl/

[19] DTD: Document Type Definition

[20] http://www.dublincore.org

[21] http://www.dlmeta.de

The DLmeta data model can be divided into two parts. The first part describes the bibliographic data of the multimedia object according to the qualified Dublin Core Metadata Element Set, whilst the second part describes the technical properties of the multimedia object using elements defined in the" Baden-Württemberg Digital Library" project. Additionally, a "Local" element has been introduced which allows us to extend the XML DTD (XML document type definition) and define data structures necessary to satisfy local needs.

DLmeta combines the strengths of the XML technology with the results of the Dublin Core Metadata Initiative and extends its scope to the technical properties of the multimedia objects. DLmeta is very detailed and offers more than 130 distinct elements and attributes. Together with the extensibility through the "Local" element, this data model is believed to cover the majority of possible applications in the field of electronic resources.

The combination of a powerful framework for the processing of the data in combination with the established standards of the Dublin Core has many benefits. Using well-conceived indexing applications, DLmeta allows the long-term storage of high-quality metadata. XML parsers, in most cases freely available software packages, facilitate the development of new applications that can read, write or update DLmeta data files. The data format is completely transparent through the XML DTD.

At the University Library of Karlsruhe, we are using the DLmeta data model to index and store the metadata of the content in our digital audio and video archive since the end of 2000. Indexing has become particularly simple since the DLmeta Initiative has published the DLmeta editor, a Java application which helps the librarians to generate well-formed and valid XML files without knowing the XML technology.

DLmeta data files of video and audio content which is ready to be published, is sent to the Library Service Center (BSZ), the organization maintaining the union catalog of Baden-Württemberg, so that the files can be processed and imported into this catalog. Subsequently, our local OPAC[22] is updated with the records of the Library Service Center. The digital video or audio content can then be searched using our standard web interface, much like one would search for books or journals.

A so-called "frontdoor" which is a web page with a representation of the metadata and the links to the media files provides the connection between the search result (single hit) and the electronic resource. These "frontdoor" web pages can also be generated automatically from the XML source files using a so-called stylesheet processor. "Frontdoors" are currently static HTML pages stored on the library's web site, but could be replaced by dynamic pages at any time. The use of symbolic URLs like "http://digbib.ubka.uni-karlsruhe.de/diva/2001-1/" to identify the electronic resource, together with the web servers' redirection mechanism makes the metadata representation independent of the underlying web application.

The DLmeta data model used for indexing will also build the basis for further developments of DIVA in the future.

8. Conclusions

In the year following its introduction, DIVA has enjoyed an ever-increasing awareness and popularity amongst the students and staff of the university. Due to this focus on its broad usability during the conception of the video and audio archive, it has become possible to make this new service readily available to a wide variety of uses within the university.
Thanks to the established infrastructure and the gained knowledge by the University Library, DIVA supports lessons of the university with access at any time.

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[22] OPAC: Online Public Access Catalog

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Towards the electronic parliamentary library in the context of the European Union

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Abstract:

The electronic parliamentary library at the European Union level is developing to meet the needs of a changing political context. It is emerging in multiple forms: cooperation amongst EU institutions, cooperation amongst EU parliaments, and the service of the European Parliament itself. The development of electronic services presents a management challenge for libraries, and in the context of the European Parliament there is a challenge to differentiate the library's service in a highly competitive environment. A practical framework for service differentiation is outlined. Working with 'communities of practice' is proposed as a key strategy.

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1. Introduction

This paper concerns the development of electronic library services for the European Parliament (EP), rather than for all parliaments in the European Union (EU), although it does address the issue of EU wide inter-parliamentary cooperation[2]. It takes 'electronic library' to be synonymous with 'digital' or 'virtual' libraries, meaning broadly a library service offering electronic materials[3].

2. Context

2.1. The European Parliament

The European Parliament is directly elected by the 370 million citizens of the EU and its role includes participation in the EU legislative process and scrutiny and control of the EU executive. Its origins lie in the 1950's but it became of major significance following the introduction of direct elections (1979) and increased responsibilities brought by subsequent treaties[4]. An 'electronic parliamentary library' is in the course of development in the EP. The context for such a library comprises three main elements: the political context; institutional factors; and managerial issues.

2.2. Political context

The broad political situation facing EU institutions is positive but includes some questioning of their legitimacy[5]. Specific EU issues are compounded by the reduced confidence in politicians and political institutions which seems a global phenomenon. This crisis of legitimacy is being addressed in part through efforts to develop greater 'transparency': making citizens aware of what has been achieved, explaining decisions, increasing accountability and the scope for meaningful participation[6]. There are also efforts to increase legitimacy through improved quality of legislation, with electronic information a key resource and medium for cooperation in the process. Finally, the EU institutions seek legitimacy through improving the efficiency and effectiveness of their operations. For an institution such as the Parliament whose main operations span three sites in three different countries, and whose Members work in fifteen countries, electronic communications are essential. For all these reasons, developing intranet and internet communications have therefore been a priority for the Parliament.

2.3. Institutional factors

The treaties of Amsterdam (1997) and of Nice (2000) have given Parliament a much stronger role in the legislative process: It has also been given an impetus towards even closer relations with national parliaments. Parliament needs to understand national contexts and to draw on national experience in its work. The national parliaments, in turn, may find it helpful to understand both the context of the European legislation and draw on experience in other national arenas. It follows that there is a developing need for EU-wide inter-parliamentary information exchange. This can most effectively and efficiently be supported by electronic media.

The new treaties increased the Parliament's role in legislation through the 'co-decision' procedure. The reforms have also tightened-up legislative procedures with formal deadlines and closer management by all the institutions involved. It has become more important for the Parliament to be informed, and information to the Parliament must be delivered against tight deadlines. Information about Parliament's activities and positions is also of increased interest to the other EU institutions. Again, fast and effective internal and external communication is essential.

2.4. Managerial issues

In institutions with a substantial legacy of traditional library services the development of electronic services can pose problems of transition[7]. In so far as the Parliament offers a traditional library service then it is vulnerable to the 'new economics of information'[8] in which businesses with assets "that traditionally offered competitive advantages and served as barriers to entry will become liabilities" [especially where they involve information content that can be more effectively and efficiently communicated electronically]. In such cases

> "the loss of even a small portion of customers to new distribution channels or the migration of a high-margin product to the electronic domain can throw a business with high fixed costs into a downward spiral.
>
> It may be easy to grasp this point intellectually, but it is much harder for managers to act on its implications. In many businesses, the assets in question are integral to a company's core competence. It is not easy psychologically to withdraw from assets so central to a company's identity. It is not easy strategically to downsize assets that have high fixed costs when so many customers still prefer the current business model."[9]

The need for a transition in library resource allocation may not be recognised by clients or other stakeholders, at least in the short term. The 'political' management of the transition is a key management task in the development of the electronic library.

3. Information services of the European Parliament

3.1. Introduction

The Parliament has three information services: one deals with the external audience, another provides day-to-day support to parliamentary committees, and a third provides longer term research and the main library & documentation service. All MEPs have internet access and personal research assistance, and often that provides as much supplementary information as the MEPs require. Many organisations target their information services on the MEPs for lobbying purposes. The various party groups in the Parliament support their own internal information services, and of course national party structures also provide information. Information overload rather than information delivery is seen as the MEPs' problem.

3.2. Directorate General (DG) for Research and Documentation

This DG provides what would be recognised by professional peers as the library, documentation and research service of the Parliament. Its intranet site combines access to research products, external databases, the library catalogue, selected internet links, service information, staff directory etc. In so far as there is an emerging 'electronic library' for the Parliament, then it is this site, but it exists in a competitive and slightly chaotic environment.

4. Towards a common library of EU institutions?

4.1. EUROLIB

There is voluntary cooperation at the practical level between the libraries of EU institutions and related agencies through the EUROLIB organisation[10]. While most of the libraries have distinct subject specialisations and clienteles there are both information sources and processes which are common. In these areas there is scope for sharing information electronically, consortium negotiation and purchasing, sharing expertise and cooperative work. In this practical cooperation it is possible to see an emergent electronic library at the European level, consisting of some common infrastructure and content.

4.2. An inter-institutional library?

Recently, the more ambitious concept of an integrated 'inter-institutional library' has been the subject of a high-level proposal. Current thinking is that this would be a physical library based in Brussels serving the three main institutions (Parliament, Commission and Council of Ministers) but open to the staff of all EU institutions and perhaps, in time, the public. An electronic inter-institutional library could meet some of the basic electronic library requirements of the institutions as a consortium; it may also have some value as an interinstitutional resource which could be accessed by citizens from across the EU[11]. The emphasis on a physical library in the new proposal underlines the fact that professional thinking on electronic services could be out of step with that of clients - a problem identified by Evans and Wurster.

5. Towards an electronic library for European parliaments?

Information exchange between Parliaments has already been highlighted as an emerging requirement. Following the conclusions of a conference of Speakers of national parliaments in 2000, the ECPRD[12] is elaborating an electronic information service concept. This is intended to facilitate the tracking of EU legislation and the exchange of research and documentation on current national and international issues. A basis for information exchange is being laid by the common use of the Eurovoc thesaurus and the ongoing development of ParlML (based on XML) to structure parliamentary documents. The service will be placed on the ECPRD site as a central place in the European arena: to act as the switching point between parliaments, to make use of work already done at the EU level, and to undertake or collate added-value services such as translation and indexing.

6. Developing the electronic library of the European Parliament

The EP has a profusion of electronic information sources both internal and external. The end result is not wholly positive: it includes information overload, complexity and inefficiency. It underlines the difference between simply providing electronic resources and an 'electronic library'. The elements which make a 'library' distinct are traditional, obvious, ones, even if they take new forms[13].

6.1. Differentiating the library

The key clients we wish to reach have access to good information from other sources - in most cases, too much information and too many alternative sources. On a case-by-case basis these other sources may have advantages in being more specialised, closer to the action, tailored to a political view etc. To succeed in such a competitive and 'noisy' environment, the Parliament's electronic library must offer a package which is clearly differentiated from alternative sources.

The most obvious 'Unique Selling Point' (USP) of parliamentary services should be that they are **non-partisan and dedicated to the primary work of the Parliament**. Other information sources are partisan and/or address multiple audiences. This means for the MEPs that their electronic library should be a safe information source which is uncompromisingly dedicated to their requirements. This is a message that should be pervasive in service communications and in the development of staff.

The service must offer information which is **relevant**. This requires

1. front-line staff getting close to clients and understanding their precise needs, working co-operatively with clients and other information providers
2. 'environmental scanning' at a strategic level to identify emerging/future issues
3. the conversion of such knowledge into information products (produced in-house or identified from external sources)
4. added value by sifting, summarising and analysing information - pre-processing and screening for the client.
5. the minimum of editorial/bureaucratic processing - the link between client knowledge/environmental awareness and content should be as direct as possible.
6. ideally, facilities to allow clients to shape the content and organisation of the service. This can mean in terms of personalised 'views' of selected site elements and/or in terms of clients contributing information and/or in terms of normal user feedback mechanisms.

Currency of information is key and can be achieved through

1. understanding of client requirements and environmental awareness
2. investment in current awareness of staff (the web site itself can be part of this)
3. management commitment to maintaining current information on the site
4. a production system for the web site which allows for rapid publication.

The service must offer **convenience** to clients, which can be delivered through:

1. simplicity of use through design and ease of information retrieval
2. customised or semi-customised access to information
3. rapidity of loading (simplicity of design)
4. ready access to human assistance, hard copy information and referral to specialist services
5. access off-site (i.e. on the Internet or through external access to the network).
6. bringing together of key information sources, directly and through search facilities.

The ultimate objective in this last case could be an integrated search mechanism which allows a single search procedure to produce a unified result from all recommended sources. This appears one of the key issues in developing an electronic library. New electronic information sources and substitutes for labour-intensive in-house indexing and cataloguing can be bought in, but the various sources need to be integrated for clients if they are to offer the same convenience as a traditional library, and if the 'electronic library' is to be distinguishable from the electronic jungle. Integration poses technical problems but also ones which relate to commercial and intellectual property issues e.g. combining access to open sources with access to those with password protection or specific licensing requirements. Interestingly, Akeroyd reports research which suggests that clients may shun what appears the obvious convenience of integrated searching[14].

The service should develop a sense of **ownership** and **community** in its users, through:

1. organising the site to reflect and support existing and potential 'communities of practice' (see section 6.2 below).
2. an active policy of user feedback which results in visible and rapid action.
3. making users visible on the site (e.g. publishing comments, allocating space for 'newsgroup' type features, creating knowledge directories, profiles of interesting users etc.).
4. off-line activities for users, bringing users and staff together

6.2. Communities of practice

The concept of 'communities of practice' is one of the most interesting in the field of knowledge management. Briefly, it is suggested that "collective practice leads to forms of collective knowledge, shared sensemaking, and distributed understanding that doesn't reduce to the content of individual heads….[A community of practice is a] group across which such know-how and sensemaking are shared - [a] group which needs to work together for its dispositional know-how to be put into practice"[15]. The subject-specialised committees of the Parliament can be regarded as the focus for communities of practice extending through the politicians, the committee administrators, experts in the political groups, external experts, in-house researchers, documentalists etc. Equally, such a community might exist at the inter-parliamentary level. The strength of these communities in the EP, and the extent of library/documentation service participation, varies a great deal. Communities of practice in their nature are informal and cannot be constituted by administrative action. However, the facilities of the electronic library can be directed to supporting communications within the group, creating a forum where existing members can easily exchange information and new/potential members can learn and effect an introduction to the community. The attractions of this community forum can be enhanced by using the same facility to provide access to formal knowledge (internet resources, databases, books etc) and to specialist news. Orienting electronic library services to support communities of practice has important benefits:

- the library aligns itself with the core work and key players of the institution, in a practical and visible way. This means that the service is relevant and demonstrates it is relevant.
- the library enhances the operation of the institution, in as far as it enriches the dialogue of its communities and helps to build the communities. (This last is important in a multinational organisation with a relatively transient population).
- library staff can access and be involved in the communities and so can maintain the relevance and visibility of library services in general.

Parliament has sought to support communities of practice through the creation of joint researcher/PDC subject teams, and through the development of new electronic services designed around the subject specialisations of Parliamentary committees. At the inter-parliamentary level the national parliaments, notably through the ECPRD also intend to offer a service which will support actual and potential communities.

7. Conclusion

The EU has perhaps been slow in taking up the idea but the momentum for creating an electronic EU library is now strong. If the electronic library is in its infancy (Akeroyd) then we are conceptually at an earlier stage: will it be twins (parliamentary and inter-institutional) or triplets (add inter-parliamentary)? Will the inter-institutional consume its siblings? It is clear in any event that there are unprecedented opportunities for parliamentary libraries to benefit their parent institutions. These benefits will be based on traditional library skills and virtues such as co-operation, but require a break from the past in terms of resource allocation and the rigorous application of a strategy of differentiation.

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[1] The opinions expressed in this paper are the sole responsibility of the author and do not necessarily reflect the official position of the European Parliament.

[2] An impression of developments across European was conveyed at the "The electronic library for parliament" seminar held by the European Centre for Parliamentary Research & Documentation in November 2000 (no proceedings published to date). This included a report of a questionnaire completed by 36 European parliaments/assemblies. Electronic services are ubiquitous - 100% had an internet site and 86% an intranet.

[3] For general background on electronic library issues, see article by Akeroyd.

[4] An introduction to the Parliament can be found at http://www.europarl.eu.int/presentation/default_en.htm

[5] Regular polls of EU citizens show a peak in support in 1991 (72%+ thought membership a 'good thing'), and it has fallen fairly steadily since then (to 49% in 2000 - around the level it was in 1981). Amongst 25-39 year olds it has fallen from 75% in 1991 to 50% in 2000, and amongst 15-24 year olds from 73% to 55%. (Eurobarometer, Report No. 35 p. A12 & No. 53 p. 53, p.B12).

[6] See, for example, Article 255 EU Treaty, EP Decision 10.7.97; Council Decision 93/731/CE

[7] See Akeroyd for a practical discussion of some of the issues.

[8] See article by Evans & Wurster.

[9] Evans & Wurster, p. 82.

[10] EUROLIB currently has 21 members, drawn from EU institutions, EU agencies and other organisations which operate at the European level and deal with European information.

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[11] The concept of a common electronic library as a support to an existing network of conventional libraries can be seen in the UK with the pilot electronic library of the National Health Service http://www.nelh.nhs.uk/

[12] The European Centre for Parliamentary Research and Documentation is a cooperative body under the aegis of the European Parliament and the Parliamentary Assembly of the Council of Europe, set up in 1977. It is primarily a network of research departments and parliamentary libraries but also involves other officials responsible for information gathering and dissemination. Its aim is to facilitate contacts and exchanges between the officials of member parliaments.

[13] "if we argue that traditional libraries comprise more than just data, if we define them as the sum not only of information sources, but also navigational tools, metadata systems such as catalogues, human support systems and a suitable environment within which information is delivered, then we can say that the digital library is still in its infancy" Akeroyd, p. 1.

[14] Akeroyd, p. 2

[15] Brown & Duguid, p. 8.

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The Website Library and its Parliamentary Information & Dissemination Services: a Case Study of the Parliamentary Library of Taipei, Taiwan, China

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Abstract:

The website library is a new type of digital library incorporating both digital collections and digital service. In the parliamentary context this new application of information and communications technology has a dual function: to provide a virtual collection to satisfy users' information demands, and to provide all the current services needed by clients of a parliamentary library in modern society. In the present paper, the application of information technology in the library, the role of media in the library, and its digital collection development are surveyed by decades from 1960 to 2010. Then the five categories of Internet-based content in the website library of the Parliamentary Library of the Legislative Yuan are described, and an overview of this website library's services is given.

1. Introduction

A website library is by nature a vehicle of digital library service. Indeed, a simple definition of a website library would be that it is a digital library that provides not only electronic collection access but also electronic client services via the Internet.

The website library of the Legislative Yuan of the Republic of China (Taiwan) originated from the development of an Internet site for the Parliamentary Library. However, the creation of a website library not only includes building up the library's Internet presence, but also combining the concepts and practice of website design with the full range of activities of the library. In this way the scope of library service can be expanded in cyberspace, to attract many more clients and provide diversified access and assistance beyond the limits of what can be accomplished in a real library space.

In designing our website library the staff of the Parliamentary Library of the Legislative Yuan decided to create four modules for the provision of library service via the Internet. These were a reference question and answer service (QA), a selective dissemination of information service (SDI), a multimedia information storage and retrieval service (ISAR), and a general Internet access through the library's portal. The objective was to create a virtual library service network able to meet the massive information demands of legislators.

The website library is not a sudden invention. It has developed naturally with the growing role and influence of information technology in libraries. Table 1 illustrates the trend by decades from 1960 to 2000, with some forecasts of developments to 2010.

Decade	**1960-1970 Decade of Communication Technology**	**1970-1980 Decade of Computer Applications**	**1980-1990 Decade of Information Applications**	**1990-2000 Decade of the Internet**	**2000-2010 Websites & Second-Stage Internet**
Information Technology	(1) Professional Librarians (2) Professional Counseling & Information Service	Library Automation Systems	All Kinds of Databases for Resource Development & Utilization	(1) Electronic Publishing (2) Electronic Collections (3)Hypermedia	(1) Website Library (2) Personal Digital Library

Table 1: Information Technology Applications in the Library Profession 1960-2010

2. *The Contents of the Website Library*

Digital media have grown rapidly since the digital revolution started in the early 1990's. Due to the benefits of digital transmission of information, a rapid conversion has occurred from the analog formats of paper-based, audiovisual or microform media to digital formats which are machine readable and compatible with automated data processing.

The digital revolution has influenced libraries to varying degrees. One phase has been the development of a digital library collection from electronic resources, parallel to the main collection; but another stage could see the digital collection becoming the core of the library. Table 2 summarizes the main information storage media in libraries in order of importance in the five decades from 1960 to 2010.

1960-1970	**1970-1980**	**1980-1990**	**1990-2000**	**2000-2010**
(1) Paper (2) Microforms (3) Audiovisual	(1) Paper (2) Microforms (3) Audiovisual (4) Magnetic Tape	(1) Paper (2) Magnetic Tape (3) Microforms (4) Audiovisual	(1) Paper (2) Digital Media (3) Other	(1) Digital Media (2) Paper

Table 2: Principal Media in Library Collections, 1960-2010

The Parliamentary Library of the Legislative Yuan established the first stage of its website digital library in 1999. This was mostly based upon the Chinese online databases which the library itself had developed in the 1980's and 1990's, and upon the corresponding patterns of legislative reference service which the library had evolved since 1980.

The website library contents can be divided into five domains or zones, each with its own type of service suited to the different character of the information it supplies. These distinct domains of service and content could be called the browsing zone, the searching zone, the dissemination zone, the reference zone and the leisure zone. Their characteristics are presented in Table 3. In this table we have analysed the nature of the information stores and data linkages within our website library under six separate characteristics: (1) the type of resources available; (2) the function served; (3) the type or degree of interaction via the user interface; (4) the scope of the intended audience;
(5) whether or not service requires subscription; (6) the availability of participation by a postings capability for network users.

Domain ***<<<<<<<<*** ***Characteristic***	**Browsing Zone**	**Searching Zone**	**Dissemination Zone**	**Reference Zone**	**Leisure Zone**
Resources	Static Materials	Cumulative Materials	Current Materials	Indicative Materials	Materials for Pleasure
Function	Browsing	Searching	On-demand	Guide	Browsing
Interactivity	Low	High	Both Interactive & Automatic	Crossing through only	Yes
Audience	Entire Network	Partial Net / IP	IP Address only	Entire Network	Entire Network
Subscription	No	Partial	Yes	No	Sometimes
Participation By Postings	No	No	Yes	No	Yes

Table 3: Content Domains and their Characteristics in the Website Library

The advantages of building a website library according to fixed content domains are: (1) more efficient electronic access for library clients, and (2) being able to offer user support services, value-added services and reference services via diverse e-collections.

3. The Browsing Zone

It is important that a website library contain both the library catalog and a help feature giving orientation, instruction and starting points for users. In addition, our browsing zone includes: (1) official documents and bulletins of the Legislative Yuan, such as the *Record of Interpellations* (questions to ministers) , *Legislative Resources* (summaries of meetings), or *Sources of Law* (new enactments passed); (2) information packages compiled by professional librarians, such as our *Hot Topics* for current events; (3) bibliographic information on new acquisitions, such as our *Periodical Contents* bulletin and our new book bulletin.

4. The Searching Zone

Database access is one of the basic functions of the website library. The technology can be traced back to the 1970's or even earlier. Its evolution is shown in Table 4.

Period	E-name	Form of Contents	Medium
Pre-1970	Electronic Files	Electronic Documents/ Electronic Records	Single Medium
1970-1980	Stage 1 Databases	Bibliographic/Indicative/Numeric Searchable Arrays	Single Medium
1980-1990	Stage 2 Databases	Bibliographic/Indicative/Numeric/ Full-text Searchable Arrays and Image Bases	Multi-media
1990-2000	Digital Library	Address-Linked Libraries/ Museums/Galleries/ Archives/Catalogs	Hyper-media
2000-2010	Knowledge Databases	Intelligent Expert Systems/ Knowledge Systems/ Learning Systems	Single Medium or Multi-media or Combined Media

Table 4: The Development of Digital Database Collections, 1960-2010

Digital library collections must strive for comprehensiveness in their database access. The number of searchable items provided by its databases and the number of subject fields covered in its databases are two important measures of the level of collection development of a website library.

The searching zone of our website library at the Legislative Yuan has three components. The first component consists of the Chinese databases of the Legislative Yuan's activities developed by the library since 1985, such as our Laws database, Interpellations database, Proceedings database, Periodicals database, News database, and Library system. Most of these database systems have been transformed into web-based versions in recent years. More recently five new databases have been added to this category: the Legislative Yuan's Law Amendments database, the Bill Tracking database, the Legislative News Summaries database, the Legislators' Speeches database and the Parliamentary Forums. The second component of our searching zone comprises Chinese commercial databases; while the third includes non-Chinese commercial databases (mainly in English), such as Grolier Online, Lexis.com, EBSCO Host, and DIALOG SELECT.

The parliamentary materials of our searching zone, in the Chinese databases which we ourselves have developed, are in the public domain and free access to them is possible. In the case of all the other, commercial databases in our searching zone we have to deal with copyright when downloading and printing. Obviously, access to the IP address for database searching is a management issue in terms of intellectual property rights.

5. The Dissemination Zone

The global acceptance and continuing development of the Internet are mainly attributable to its success as a means for the dissemination of information. The public demand for Internet access empowers the website library of the Legislative Yuan as a vehicle of public information in the information society, more popular even than the traditional public library.

Reporting useful news and information via the web to library clients is a necessity in the everyday activities of our Parliament. So, planning and constructing a network area to deliver a current awareness and instant information service according to user needs, and especially a service that reports news relevant to them, was essential in building our website library. The information packages (or knowledge packages, or subject knowledge sets) delivered in our website library are products of the Parliamentary Library for its public. Our core knowledge service is a user-oriented, profile-based, preliminary knowledge management system. The website library is important as a provider of information portfolios and value-added knowledge services to the general public to help them navigate in our modern society.

6. The Reference Zone

To promote professional expertise in library service, a website library should at least offer the following four electronic reference tools, which together form a complete web resources check-list: (1) a website catalogue by classification or by subject; (2) an index of all web pages in the website; (3) a website analysis and usage evaluation, and (4) a detailed website contents guide.

The website catalog service of the Parliamentary Library, originally called the website inventory, was drafted on the basis of the proposal for a Global Information Infrastructure made at the G-7 economic summit conference in 1995. As to the indexing of web pages, it has to include both a general index and an in-depth index. Our general web-page index is similar to a periodical contents list; our in-depth index combines features of a contents index and a full-record text index.

Website analysis and usage evaluation are significant both for website promotion and for resource management. They are identical to the user analysis done in the traditional research library and information center. The website contents guide is another useful and objective web reference tool. It contains technical data on the website, web administrator, web owners, web communication protocol, information technology service provider and maintenance arrangements, website costs, activity reports and value of information provided.

7. The Leisure Zone

The chief purpose of the website library is to be a communication center in cyberspace. From this new perspective, we can see that a website library contributes news, information, education and entertainment to web users, or Internauts, everywhere.

The website library can provide a multiplex digital space for all kinds of activities related to people's life and work, to arts, literature and entertainment. *Refreshment on the Web* is a general Internet reading room in our website library at the Legislative Yuan. It contains eight small areas devoted to the arts, film, humour, literature, travel, music, daily life, and comics. It is a cyberspace zone for leisure activity from which readers can explore the wonders of the virtual world.

8. Services from the Parliamentary Website Library

I. A Chinese E-paper for Library Clients

Our current information delivery service is a daily electronic newspaper published by the Parliamentary Library and distributed to the public as well as library clients. Beginning on July 1, 2000, it had published two hundred issues by April 11, 2001. Items in our e-paper include: (1)

daily legislative news; (2) the latest laws; (3) legislative summaries; (4) a record of general policy questions (interpellations) to the government in the Legislative Yuan; (5) a Parliamentary forum; (6) committee reports; and (7) a report from our international legislative awareness service.

II. Multilingual Legislative Awareness

Our multilingual, international legislative awareness service, or *Dispatch of Current Legislative Information,* is a daily report service providing major international news and updates on the status of legislation around the world. Translated from reliable sources in eleven countries, this report provides a Chinese edition of news and other materials which originally appeared in the Chinese, English, Japanese, German, Spanish and Russian languages. It is one of our most rewarding and popular services.

III. Library E-mail Distribution Service for Press Clippings

News and commentary about Parliamentary legislators from sixteen local Chinese or English newspapers will be selected and filed electronically each day through an extension of the Legislative Yuan News System. These electronic press clippings on parliamentarians are automatically e-mailed to each legislator's individual e-mail box at 10:00 p.m. daily.

IV. Information and Knowledge on Demand

The new, second phase of our library automation project (or LA II) at the Parliamentary Library of the Legislative Yuan features an on-demand Internet information dissemination service on topics chosen by our clients. Users may easily select topics of interest and construct a research profile from our subject thesaurus. Then the LA II system will compile all of the current website resources related to the chosen subjects and e-mail site references to users promptly. This subject access to websites is an individual subscription feature of our website library.

V. Subject-oriented Information Packages

The subject-oriented information package service of our website library draws on a well-organized and comprehensive online collection of web resources arranged by subject headings. The service collates and stores links to previously prepared research materials under an online menu, and thus makes them available for use by everyone, whether as a direct reference or as background for further research.

9. Conclusion

The website library is an information technology application less than three years old, but it is already showing itself to be a very important component of the hybrid library of the future that will seamlessly combine real-space and cyberspace collections. Thus the website library is the shape of things to come for the research libraries' community, of which the parliamentary libraries are a family member.

We, as parliamentary librarians, have a responsibility to welcome and shape our electronic future, keeping pace with the evolving electronic world of information. The website library of the Legislative Yuan is a pilot project for our new role in the dynamic knowledge economy, as managers of parliamentary knowledge.

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Making a difference in the knowledge age at the New Zealand Parliamentary Library

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Abstract:

Knowledge management is a much-used term in our literature. What it means for Parliamentary Libraries and how much one can apply the principles and processes of knowledge management to the environment of a Parliament and particularly, the New Zealand Parliamentary Library, is the topic to be covered in this paper.

Parliaments are complex organisations in areas that are markedly different from corporate organisations. For instance, they are usually federal in structure, with four to five agencies held loosely together. A chief executive heads up a corporation and is responsible for ensuring the efficient and effective operation of the company. Generally, that is not so for Parliaments. Most corporations have a common goal and everyone in the company is working towards achieving the common goal. Generally, that is not so for Parliaments.

In a Parliamentary environment, not all the knowledge management processes are relevant or applicable. In our view, the most important component of a knowledge management programme is knowledge sharing. However, one must admit that to some extent, knowledge sharing is not a natural behaviour -- but all organisations have areas where they knowledge share -- though that activity may be done grudgingly. In Parliaments, the areas where knowledge is shared (even though grudgingly) are larger, and more institutionalised and unlikely to break down because of party boundaries and because Parliaments have strong core operations. Given that, what is useful for Parliamentary Libraries to reflect upon is the area of knowledge management.

Gartner Group has defined knowledge management as a (...) "discipline that promotes a collaborative and integrated approach to the creation, capture, organization, access and use of an enterprise's information assets. This includes databases, documents and, most importantly, the uncaptured, tacit expertise and experience of individual workers".
They define six knowledge processes:

- Knowledge sharing culture;
- Knowledge infrastructure;
- Leading a knowledge team;
- Managing knowledge processes;
- Establishing knowledge content, and;
- Evangelising knowledge.

In our view, some of these knowledge processes are more applicable to the work of parliamentary libraries than others.

Knowledge sharing culture

This is the most important knowledge process, and one that is openly recognized as the most difficult, because it requires a great deal of culture change. It is also the most problematic of all the knowledge processes for parliaments. Knowledge sharing does occur across party boundaries, but it is usually intensely political, carefully controlled and limited in nature. It does not lend itself to formalised, structured knowledge sharing systems and processes.

Administrative units can improve their knowledge sharing within their own unit and between administrative units. So there are opportunities for parliamentary libraries to improve knowledge sharing, from within the library, and also with other support units.

Knowledge infrastructure

This includes a range of technological tools that enable knowledge management. Generally, the technologies used are tools that permit:

◊ browse and search access to information;
◊ some profiling tools;
◊ push technology, and;
◊ a groupware or workflow tool that supports content creation, organisation and communications.

Many parliamentary libraries have browse and search tools, some have push tools, but most don't work with groupware or workflow tools. Generally the parliamentary library is a user of this infrastructure, possibly a heavy user, rather than as a key influencer or a partner in making infrastructure decisions along with IT professionals.

Leading a knowledge team

Parliamentary Library staff has many of the attributes of a knowledge team, in that they provide research and analysis, disseminate, acquire and organise knowledge, and frequently provide training in and promotion of the use of knowledge resources. A full KM team is likely to include people with roles that are unfamiliar to a parliamentary library, such as people who facilitate networks (groups of people talking to each other across the organisation and sharing knowledge in new ways) and knowledge initiative managers who lead projects to change the knowledge sharing culture and to capture the intellectual capital of the organisation in structured systems.

Managing knowledge processes

Knowledge processes are identified as acquiring, structuring, organising, adding value, and deploying knowledge. Librarians might describe those as acquisitions, cataloguing/ indexing and responding to information requests. Knowledge managers are likely to take more responsibility for the learning process, for instance in exploring what the users do with the information that has been disseminated to them. To move further along the knowledge management scale it would be useful to focus on providing solutions to questions like these:

- How could the New Zealand Parliamentary Library deploy information resources to make them easier for client use?
- How can we add value to the information so that it is quicker for clients to absorb the information and to apply the information to the decisions they must make?
- What training and tools should the NZ Library provide so that its clients can competently research the information resources available to them (including the internet) when they need to?
- How should the NZ Library integrate access to internal information as well as the more traditional published information that libraries have always provided?
- What information would the NZ Library's clients like to have access to on a one-stop-shop basis, and what are the existing Library initiatives that would allow to deliver on this?
- How should the NZ Library provide access to a wide range of formats to our clients beyond the printed documents that are familiar to the Library?
- What communication channels exist that integrate information across the whole of parliament?
- The nature of the Library's relationship with the communications channels, whether contributor or owner?

Establishing knowledge content

Establishing knowledge content includes building an information collection accompanied by a summary of its context and usefulness -- thereby making it possible for the right user to find the right piece of information at the right time. In many parliamentary libraries, research publications provide some aspects of this activity in that they provide analysis, context and information comparisons. As well, this activity can include aspects of document management such as version control and tracking of documents. Cataloguing and indexing fit into this activity, especially when those activities focus on the context and content of the information.

Evangelising knowledge

This process includes talking to our client base about what we do at every opportunity, in order to maximise the use and usefulness of the knowledge bases that we create. It includes measuring the value of what we do with customer surveys and other performance measurements. It also includes ownership of knowledge channels, which might include bulletin boards, intranet chat groups or other ways of disseminating knowledge throughout parliaments.

Knowledge management initiatives at the NZ Parliamentary Library

Based on the above discussion of knowledge processes, to fully espouse knowledge management would require a radical broadening of the role of most parliamentary libraries. There is certainly no mandate to implement knowledge management in the New Zealand Parliament -- where the mandate barely allows moving beyond librarianship to information management! However, some aspects of knowledge management are being worked on. These include:

- Deepening our understanding of client information needs through a client liaison programme;
- Working with other parliamentary agencies to re-develop the parliamentary Intranet and Internet sites. In particular, we are working toward a lead role in structuring and organising knowledge and in user interfacing –including the browse and search tools that are provided;
- Involvement with e-government initiatives, particularly with metadata standards, allowing decisions on what changes to make to our own cataloguing and indexing processes -- thereby enabling easy integration of information in a range of formats and for a range of output devices (including WAP phones etc.);
- Reviewing our range of current awareness products so that they provide more targeted and filtered information -- quicker for our clients to read, more pertinent to them, and easier for them to use to inform them on the decisions they must make;
- Building relationships with other parliamentary agencies to increase the number of collaborative projects that look at the information flow across the whole of parliament in a way that responds to the needs of Members of Parliament rather than to traditional organisational boundaries.

Knowledge management is a discipline with strong links to librarianship, and with a certain degree of relevance to the work of parliamentary libraries. Some of the knowledge processes are relevant to parliamentary libraries and some are not. It is the responsibility of every parliamentary library, including the New Zealand Parliamentary Library, to examine what is useful to them from the knowledge management discipline and to initiate projects where appropriate.

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LOOKING AFTER THE BIBLIOGRAPHIC HERITAGE OF MEXICO

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A glance at its origins. During the three centuries of the Spanish colonial period few countries of the New Continent had such a richness of books as the New Spain. The first books were brought to Mexico by the conquerors.. The mendicant orders monks, Franciscans, Dominicans and Augustinians, came along with new ideas and with the books that supported them.

The Renaissance, which came to Mexico under the influence of Erasmus, More, Vives, the Italian poetry and the classic authors, was spread by Fray Juan de Zumarraga, the first Mexico's bishop, as well as by the University professors, the erudite monks and the Jesuits in their colleges. As a result, a new medieval and renaissance community emerged, blended with the traits of the Mexican indigenous reality. The books of that period, both Mexican and European, held in the libraries all over the country, are witnesses of the cultural blend that ruled the colonial period in Mexico.

Through the XVI century, valuable libraries began to be established, such as the ones created in the Mexico's Cathedral, in the Colegio de Santa Cruz de Tlatelolco (Holy Cross of Tlatelolco College), and Fray Juan de Zumarraga's own library. The monastic libraries were created because of the need of the monks to provide their monasteries with the fundamental books, both for their own studies and for their instruction responsibilities. The most relevant libraries were those established by the Franciscans, the Augustinians and Dominicans. Later on, the Jesuits started to form their college libraries, in which they lectured on theology, law, and Latin language. Real y Pontificia Universidad de Mexico (The Royal and Pontificial University of Mexico) required the printing of university texts since 1554.

Accordingly, the creation of a printing house in the New Spain was a natural consequence, specially in the time when the book already had a great power and influence in the Western world The very noble, loyal and great city of Mexico had the privilege of being the seat of the first printing house established in order to conquer the New World. The history of this city is closely related with the printed documents. During 43 years, it was the only city in the American Continent where books were printed. Charles V granted Fray Juan de Zumarraga the right to establish the printing house in 1539, supported by the viceroy Don Antonio de Mendoza, thus the typographic workshop of Juan Cromberger, operated by the Italian Juan Pablos, started its activities with the printing of the *Breve y mas compendiosa doctrina christiana en lengua mexicana y castellana,* of which no testimony remains up to now. The fist books that emerged from this printing house, and those which appeared afterwards, were oriented to provide the required readings for the evangelization of Indians, as well as for the Spanish language teaching, and for the prayers or pious books. This is how the first tools for the evangelization were created. The history mentions, not lacking of admiration, the great ability of the monks to learn so rapidly the Indian languages, as well as of the Mexicans to learn the Spanish language, a fact that made possible the writing of the first grammars and vocabularies of the New World's languages. Thus, doctrines, cathecisms, and lexicons were printed, aimed both for the religion and the language instruction, and therefore the first linguistic studies appeared, providing additionally a writtten version of the native languages. An estimation of 38 printed documents were addressed to Indian languages: *"the printed works in vernacular languages of Mexico constitute the big innovation, the highest contribution to a world in which the books written in European languages were finding their way between the Latin and Greek classics"* [1]

Antonio de Espinosa, Pedro Ocharte, Pedro Balli, Antonio Ricardo, Melchor and Luis Ocharte, and Enrico Martínez, the XVI century printers who became the successors of Juan Pablos, printed not only religious books, but also medicine, law and music textbooks, as well as those devoted to the study at the University and in other existing colleges. The number of books produced in the New Spain printing houses in the XVI century is not clearly known, but nearly 200 are mentioned.

Anothe example of the importance of these books for the bibliographic and cultural history of the American Continent, is provided by Lota M. Spell, a researcher of the history of music, in Austin, who mentions that in Mexico City, considered the heart of the cultural life of North America at that time, ten books were published (from 1556 to 1604) which included printed music, the greatest part of it in red and black inks, among which are the *Ordinarium sacri ordinis* (1556), the *Missale Romanum Ordinarium* (1561), the *Graduale dominicale* (1576), considered the most precious and beautiful, now is preserved at the National Library of Mexico, finally the *Liber in quattor passiones,* the only musical printed book of the XVII century. These books, "of which no printer could be ashamed of", constitute the first printed music books in the American Continent. [2]

In the same way, four medicine books can be mentioned; the first being the *Opera Medicinalia* (1570), the ones on legislation, *Ordenanzas y compilación de leyes* (1548), and the academic textbooks *Physica speculatis* and *Dialectica resolutio* (1554) for the Royal and Pontificial University - whose 450 anniversary of its establishment will be commemorated next September 21st - all of them are the first books in their field printed in the New World.

In the following centuries, the colonial society changed and "was transformed in an era of wealth and splendour, of luxury and extravagance for the creoles who, of course, already were proud of their own identity, and who believed that not everything was due to Spain. The New Spain was their country, and they considered it honorable and beautiful. They had built an original culture, extravagant in its pomp and solemnity, in its gallantry, in and its exquisite art and gastronomy, It was at the same time a pious and a highly joyful society" [3] This society had already the University and other colleges, where the young creoles attended for their studies.

The society's interests are shown in the printed works of the XVII and XVIII centuries, and also in the European books that formed the colonial libraries. The outstanding libraries of that period were the Palafoxiana Library, the Turriana Library, and the one at the San Carlos Academy, this one being the first art library in Mexico.

A recent book published by the National Autonomous University of Mexico: *Memoria de Mexico y del Mundo: el Fondo Reservado de la Biblioteca Nacional* confirms the above mentioned and adds that during the XVII century, a new atmosphere revitalized the New Spain, when a golden era of material prosperity began to appear, which undoubtedly stimulated the cultural advancement of the most privileged citizens (Spaniards and creoles)... The poems of the *Grandeza Mexicana* of Bernardo de Balbuena, describe with detailed and glorified praise a city that already believed that could be compared with the most famous metropolis. Sor Juana Ines de la Cruz and Carlos de Sigüenza y Gongora flourished in this century.
Also along thiat century, the importance of women in the printing industry and in the book stores businesses was relevant, being the widows of Juan de Ribera and Bernardo de Calderon, among others, who made possible the operation of the printing houses when their husbands died. [4]

Francisco Javier Clavijero, Francisco Javier Alegre, Manuel Fabri, Juan Luis Maneiro, together with other distinguished Jesuits, flourished in the XVIII century, the New Spain golden age. The Bourbon reforms also arrived to the New Spain, and are evident, among other fields, in science with the famous Jose Ignacio Bartolache, Miguel Vanegas, Jose Antonio Alzate, who enlightened the mathematics, the medicine, the zoology, the mining, the metallurgy, the physics, etc. Also, royal laws were published to guarantee the order and the good government practices, as well as linguistic works and the first printed bibliography of the New World, the *Bibliotheca Mexicana* by Juan José de Eguiara y Eguren. Books on archaeology and history of Mexico began to be published, and the University of Mexico continued to produce and to publish a great number of books.

The *Gazetas de Mexico* and the *Mercurio Volante* constitute the first expression of the Mexican journalism, which served the creoles to divulge their studies and knowledge. The *Calendarios,* highly popular during the following century, began to be published.

"Transcendent century, heir of traditions and contents revitilizer, the XVIII century makes possible the great national events of the XIX century, in many ways preparing them" [5]
Considering such a bibliographic richess, we might ask ourselves:
How many books were published during those centuries of the viceroyalty in the New Spain?
The accurate figure is unknown, but it is possible to assert that Mexico was, in the New Continent, the country with the highest number of printed documents.

The distinguished Mexican bibliographers Joaquín García Icazbalceta, Jose de Paula Andrade, and Nicolas Leon, in their well known bibliographic works, recorded the production during the three centuries of the colonial period. This bibliographic work was compiled and enlarged by Jose Toribio Medina in his work *La imprenta en Mexico, 1539-1821.*

MEXICAN BIBLIOGRAPHIC PRODUCTION
1539-1821

CENTURY	TITLES	WORK	AUTHOR
XVI century	118	Bibliografía Mexicana del Siglo XVI.	J. García
Icazbalceta			
	179	2 ed. 1954 Millares Carlo	
XVII century	1394	Ensayo Bibliográfico del S. XVII	V.P. Andrade
XVIII century	4000	Bibliografía Mexicana del Siglo XVIII	Nicolás
León			
	12412	La imprenta en México, 1539-1821	J. T.
Medina			
	2864	La imprenta en Puebla, 1620-1821	J.T. Medina

The history of the printing houses in Mexico, its development and dissemination, is a fascinating one, because in spite of the adverse conditions which they faced, especially due to the lack of paper, ink and tools, they were able to become stronger, and be a vehicle for the cultural collaboration with other countries. As a result, an exchange of printing houses and books was carried out with other Mexican cities, and also with other countries of the American Continent and with Spain. [6]

As shown above, the bibliographic heritage of Mexico is vast, varied and very rich, so that its preservation and dissemination is a big task.

Its destination. Which has been the destination of these Mexican printed works of the colonial period? Where are they?

The New Spain printed works are scattered among all kinds of libraries in Mexico, as well as in European libraries, in those of other Latin American countries, and in the United States.

From the second half of the XIX century, bibliophiles all over the world turned their attention to the Mexican printed works, and began their acquisition, since they were considered high-valued bibliographic works.

The answer to these questions is a challenge, which can only be faced by a changing attitude towards these patrimonial collections, based fundamentally on their evaluation and on a higher appraisal of this heritage, many times forgotten. This new attitude must lead to a better knowledge of this patrimony, and to struggle for its preservation, dissemination and availability.

In order to achieve the above, the Mexican libraries are workingin the creation of a data base with the function of :

- a national union catalog of the bibliographic heritage
- a reference source for researchers and for the general public
- a basis for the development of other types of catalogs
- the basis for the normalization of the records in MARC format, AACR and ISBD(A) standards
- an access to patrimonial documents by digital means

With the entry into the cooperation world, and with the use of new technologies, the bibliographic heritage would no longer be "less visible" and elitist, and it could be made available, by means of substitution documents, to all those interested in it.

The research work I began last year in order to track down the Mexican printed works of the XVI century in Mexican and in foreign libraries, constitutes a first approach to this union catalog of the national heritage.

Up to now, 125 titles of original books and pamphlets have been located, and those libraries holding the highest number of documents are: the Biblioteca Cervantina of the Instituto Tecnológico y de Estudios Superiores de Monterrey (Technological and Higher Studies Institute of Monterrey), Monterrey Campus, the Benson Library of the University of Texas at Austin, and the New York Public Library.

It certainly has not been an easy task, since several Mexican libraries have not yet catalogued these ancient documents, and foreign libraries not always have the records of these books on-line. The search for Mexican books of the XVII and XVIII centuries remains as a pending task.

The book has been present throughout our history; and today, nwith the new electronic products and the information technologies may allow a better approximation and knowledge of the valuable Mexican bibliographic heritage, so it may take the place it deserves within the information society, and also as a part of the cultural heritage of humanity.

Boston, August 21st, 2001

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3. Sara Sefchovich, *La suerte de la consorte...* Mexico: Oceano, 1999, p.41
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5. Alejandro Gonzalez Acosta. Las numerosas luces de la razon. *Memoria de Mexico...* p. 80-93
6. R. M. Fernandez de Zamora and Clara Budnik. Looking after the Bibliographical Heritage of Latin America. *Alexandria,* 13(1), 2001, p. 27-34.

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EL PATRIMONIO BIBLIOGRÁFICO DE MÉXICO

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Una mirada a su origen. Poco países del Nuevo Continente fueron tan ricos en libros como lo fue la Nueva España durante los tres siglos de la Colonia española. El libro llega a México con los primeros conquistadores. Los frailes de las órdenes mendicantes franciscanos, dominicos y agustinos llegaron acompañados de nuevas ideas y de los libros que las sustentaban.

El renacimiento que llegó a México con la influencia de Erasmo, Moro, Vives, de la poesía italiana y de los autores clásicos, fue divulgado por Fray Juan de Zumárraga, primer obispo de México, los maestros de la Universidad, los frailes letrados y los jesuitas en sus colegios. Así surgió una nueva comunidad que con rasgos medievales y renacentistas se mezcló con la realidad indígena mexicana.

Los libros de esa época tanto mexicanos como europeos, que se conservan en las bibliotecas de todo el país, son testimonio de esa mezcla de culturas que dominó los siglos de la Colonia en México.

A lo largo del siglo XVI se empiezan a formar bibliotecas muy valiosas como las que surgieron en la Catedral de México, en el Colegio de Santa Cruz de Tlatelolco y la personal de Fray Juan de Zumárraga. Las bibliotecas conventuales aparecen por el anhelo que los frailes pusieron en proveer a sus conventos de los libros indispensables para sus estudios y sus labores educativas. Se distinguieron por sus bibliotecas los franciscanos, agustinos y dominicos. Más tarde, los jesuitas comenzaron a formar las bibliotecas de sus colegios en los que impartían cátedras de teología, derecho y estudios de latinidad. La Real y Pontificia Universidad demandó la impresión de textos universitarios desde 1554.

Así pues, fue natural que en la Nueva España se estableciera una imprenta, en los momentos en los que el libro ya ejercía gran poder e influencia en el mundo occidental. La muy noble, leal y gran ciudad de México, tuvo el privilegio de haber sido la sede de la primera imprenta establecida para conquistar al Nuevo Mundo. La historia de esta ciudad está estrechamente relacionada con los impresos; durante 43 años fue la única ciudad de América en la que se imprimieron libros.

Carlos V le confiere el derecho de establecer la imprenta, en 1539, a Fray Juan de Zumárraga, apoyado por el virrey don Antonio de Mendoza, cuando el taller tipográfico de Juan Cromberger, operado por el italiano Juan Pablos, inicia sus actividades con la impresión de la *Breve y mas compendiosa doctrina christiana en lengua mexicana y castellan*, de la cual no se conserva ningún testimonio hoy en día.

Las primeras obras salidas de esa imprenta, y las que le sucedieron, estuvieron orientadas a procurar las lecturas necesarias para la evangelización de los indígenas, para la enseñanza del castellano y para las oraciones o libros de piedad. Así surgieron los primeros instrumentos de evangelización. La historia menciona, no sin admiración, la gran habilidad de los frailes para aprender en poco tiempo las lenguas indígenas y la de los mexicanos para aprender el castellano, lo que hizo posible la escritura de las primeras gramáticas y vocabularios de las lenguas del nuevo mundo. De esta manera se imprimieron doctrinas, catecismos, y vocabularios que tuvieron la doble finalidad de catequesis y de enseñanza de la lengua y surgieron los primeros estudios lingüísticos que, además, dieron escritura a las lenguas nativas. Se estima que 38 impresos estuvieron dedicados a lenguas indígenas, "los impresos en lenguas vernáculas de México constituyen la gran novedad, la gran aportación a un mundo donde los libros redactados en lenguas europeas se abrían camino entre los clásicos latinos y griegos"[1].

Los impresores que en el siglo XVI sucedieron a Juan Pablos fueron Antonio de Espinosa, Pedro Ocharte, Pedro Balli, Antonio Ricardo, Melchor y Luis Ocharte y Enrico Martínez, quienes imprimieron no sólo libros religiosos sino que de sus prensas salieron textos de medicina, leyes, música, libros de estudio para la Universidad y para los otros colegios existentes. No se sabe con certeza cuántos libros salieron de las prensas novohispanas en el siglo XVI, pero se mencionan cerca de 200.

Otro ejemplo de la importancia de esos libros para la historia bibliográfica y cultural de América, lo aporta Lota M. Spell, estudiosa de la historia de la música en Austin, quien señala que en la ciudad de México, el centro de vida cultural de América del Norte en ese tiempo, fueron publicadas de 1556 a 1604, diez obras que contenían música impresa, la mayoría a dos tintas, rojo y negro, entre las que se encuentran el *Ordinarium sacri ordinis* (1556), el *Missale Romanum Ordinarium* (1561), el *Graduale dominicale* (1576) ejemplar de la Biblioteca Nacional de México, considerado el más elaborado y bello, y el último de ellos el *Liber in quattuor passiones,* único impreso musical del siglo XVII. Estos libros, "de los que ningún impresor puede avergonzarse", constituyen los primeros impresos de música de América.[2]

De igual manera se pueden mencionar los cuatro libros de medicina, el primero la *Opera Medicinalia* (1570), los de legislación, *Ordenanzas y copilacion de leyes (1548)* y los textos universitarios, *Physica speculatio* y *Dialectica resolutio* (1554) para la Real y Pontificia Universidad, de la que el 21 de septiembre próximo se celebrará el 450 aniversario de su fundación, todos ellos en su especialidad, los primeros del Nuevo Mundo.

En los siglos siguientes la sociedad colonial se fue transformando y "se convirtió en una época de riqueza y esplendor, de lujo y ostentación para los criollos, por supuesto, quienes ya sentían orgullo de lo propio y pensaban que no todo se lo debían a España. La Nueva España era su patria y la consideraban honorable y hermosa. Habían creado una cultura original, exagerada en su pompa y solemnidad, en su cortesanía, en su arte y gastronomía exquisitos. Era una sociedad al mismo tiempo devota y sumamente festiva".[3] Además ya contaba con la Real y Pontificia Universidad y con otros Colegios a donde acudían a estudiar los jóvenes criollos.

Los intereses de esa sociedad se ven reflejados tanto en los impresos de los siglos XVII y XVIII como en los libros europeos que conformaron las bibliotecas coloniales. Fueron notables bibliotecas de esa época, la Biblioteca Palafoxiana, la Biblioteca Turriana y la de la Academia de San Carlos, primera biblioteca de arte en México.

El libro recientemente publicado por la Universidad Nacional Autónoma de México: *Memoria de México y del Mundo: El fondo Reservado de la Biblioteca Nacional,* se reitera todo lo anterior:

"Durante el siglo XVII nuevos aires alentaron a la Nueva España cuando se empezó a vivir una dorada época de prosperidad material que alentaba sin duda los progresos culturales de los ciudadanos más privilegiados (españoles y criollos). Los versos de la Grandeza Mexicana de Bernardo de Balbuena describen con ajustada exaltación panegírica una ciudad que ya creía poder compararse con las más famosas metrópolis. Florecieron en este siglo son Sor Juana Inés de la Cruz y don Carlos de Sigüenza y Góngora.

Ya en este siglo es notoria la importancia de las mujeres en el negocio de la imprenta y de las librerías, así las viudas de Juan de Ribera, de Bernardo Calderón y otras hicieron posible los trabajos de las imprentas al fallecer sus maridos.[4]

En el siglo XVIII, el siglo de oro de la Nueva España, florecieron Francisco Javier Clavijero, Francisco Javier Alegre, Manuel Fabri, Juan Luis Maneiro y otros ilustres jesuitas. Las reformas borbónicas llegaron también a la Nueva España y se manifiestan, entre otros campos, en el de la ciencia con los nombres de los ilustres José Ignacio Bartolache, Miguel Vanegas, José Antonio Alzate, quienes ilustran los campos de las matemáticas, la medicina, la zoología, la minería, la metalurgia, la física, etcétera. Igualmente son publicadas reales órdenes para asegurar el orden y buen gobierno, obras lingüísticas y la primera bibliografía impresa en el Nuevo Mundo, la *Bibliotheca Mexicana* de Juan José de Eguiara y Eguren. Se inicia la publicación de obras de arqueología, de historia de México y la Universidad siguió generando y demandando numerosos impresos.

Aparecen las primeras manifestaciones del periodismo mexicano que servía a los criollos para difundir sus estudios y su conocimiento como las *Gazetas de México* y el *Mercurio Volante*, y se inician los *Calendarios* que serían muy populares en el siguiente siglo.

"Siglo trascendente, heredero de tradiciones y renovador de contenidos, el XVIII posibilita las grandes empresas nacionales del XIX, pues las prepara de diversos modos"[5]

Ante esta gran riqueza bibliográfica, podemos preguntarnos:

¿Cuántos libros fueron publicados en la Nueva España durante esos siglos del virreinato?

Con precisión no se sabe, pero se puede afirmar que México fue el país con el mayor número de impresos del Nuevo Continente.

Los ilustres bibliógrafos mexicanos, Joaquín García Icazbalceta, José de Paula Andrade y Nicolás León, en sus conocidas obras bibliográficas registraron la producción de los tres siglos coloniales, misma que José Toribio Medina compila y amplía en su obra *La Imprenta en México 1539-1821*.

PRODUCCIÓN BIBLIOGÁFICA MEXICANA 1539-1821

SIGLO	**TITULOS**	**OBRA**	**AUTOR**
Siglo XVI	118	Bibliografía Mexicana del Siglo XVI.	J. García Icazbalceta.
		2 ed. 1954 Millares Carlo	
Siglo XVII	1394	Ensayo Bibliográfico del S.XVII.	V.P. Andrade
Siglo XVIII	4000	Bibliografía Mexicana del Siglo XVIII.	Nicolás León
	12412	La imprenta en México	J.T. Medina
	2864	La imprenta en Puebla	J.T. Medina

La historia de la imprenta en México, su desarrollo y expansión, es una historia fascinante porque, a pesar de las condiciones adversas que enfrentó por la carencia de papel, de tinta y de instrumentos, pudo consolidarse y se convirtió en un medio de colaboración cultural con otros países. El resultado fue un intercambio de imprentas y de libros tanto con otras ciudades de México, como con otros países del continente americano y con España.[6]

Como puede observarse, la herencia bibliográfica de México es muy vasta, variada y de una gran riqueza, por tanto la tarea de preservar este patrimonio y difundirlo es amplísima.

Su destino. ¿Cuál ha sido el destino de estos impresos mexicanos de la época colonial? ¿En dónde se encuentran?

Los impresos novohispanos se encuentran dispersos en todo tipo de bibliotecas de México, en bibliotecas de Europa, de otros países de América Latina y de los Estados Unidos.

A partir de la segunda mitad del siglo XIX los bibliófilos de todo el mundo voltearon sus ojos hacia los impresos mexicanos y empezaron a adquirirlos por considerarlos joyas bibliográficas de gran valor.

La respuesta a esas preguntas representa un reto que sólo se puede enfrentar con un cambio de actitud hacia esos fondos patrimoniales, basada esencialmente en su revaloración. Esta nueva actitud debe conducir a un mayor conocimiento de ese patrimonio y a luchar por su preservación, difusión y acceso.

Para lo anterior, las bibliotecas mexicanas están en la búsqueda de la formación de una base de datos que funcione como:

- ✓ catálogo colectivo nacional del patrimonio bibliográfico
- ✓ fuente de consulta para la investigación y para la sociedad en general
- ✓ base para la formación de otros catálogos
- ✓ base para la normalización de los registros en formato MARC, normas AACR e ISBD(A)
- ✓ acceso a documentos patrimoniales por medios digitales

Con la incursión en el mundo de la cooperación y uso de las nuevas tecnologías, el patrimonio bibliográfico dejaría de ser "poco visible" y elitista y podría estar a disposición de todos los interesados mediante los documentos de sustitución.

Un primer acercamiento a este catálogo colectivo del patrimonio nacional es la investigación que inicié el año pasado para localizar los impresos mexicanos del siglo XVI en bibliotecas mexicanas y extranjeras. Hasta ahora han sido localizados 125 títulos de libros y folletos originales y se han perfilado ya las bibliotecas que cuentan con el mayor número de esos documentos : la Biblioteca Cervantina del Instituto Tecnológico de Monterrey. Campus Monterrey, la Biblioteca Benson de la Universidad de Texas en Austin y la Biblioteca Pública de Nueva York.

No ha sido una tarea fácil, varias bibliotecas mexicanas no tienen catalogados estos documentos antiguos y las extranjeras no siempre tienen sus registros en su catálogo en línea.

El libro ha estado presente a lo largo de nuestra historia, ahora los nuevos productos electrónicos y las tecnologías de la información pueden permitir un mayor acercamiento y conocimiento del valioso patrimonio bibliográfico mexicano, para que de esta manera pueda ocupar el lugar que le corresponde en la sociedad de la información y como parte del patrimonio cultural de la humanidad.

Boston, 21 de agosto del 2001

Notas

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[2] Lota M. Spell. The First Music-Books Printed in America. New York, Schirmer Inc, 19??. 6p. Ilus.

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[5] Alejandro González Acosta. Las numerosas luces de la razón. *Memoria de México*...p. 80- 93

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A New World of Words: Amerindian Languages in the Colonial World

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Introduction

This presentation is based on a bibliographic project recording books from the colonial period in the Americas containing Indian Language material held by the John Carter Brown (JCB) Library. The JCB Library is an outstanding collection of primary materials relating to virtually all aspects of the discovery, exploration, and colonization of the New World. From its beginnings in 1846, when the collector John Carter Brown began to focus on the early history of the Americas, the Library has grown to include 55,000 printed books, major holdings of maps and prints, and a large number of manuscript codices. While terminal collecting dates vary for different areas of the Western Hemisphere, the holdings range from the late fifteenth century to approximately 1825, when direct European involvement in American affairs came to an end.

Reflecting the scope of the JCB, the majority of the Indian Language books are printed (rather than in manuscript) and were published both in Europe and the Americas throughout the colonial period. The Library's focus is concerned with the entire Western Hemisphere throughout this time period and the Indian Language holdings reflect this geographic and chronological range.

The works included in the bibliography document the languages of some of the Amerindian populations in contact with Europeans during this era. The types of documentation include brief word lists, dictionaries, and grammars as well as texts translated into native languages found throughout the Americas. Not included in the bibliography are books that contain only single words mentioned in passing (such as "canoe" or "bar-b-q"). Works that contain only descriptions (but not documentation) of the languages (i. e.: "the natives all speak sweetly") are not listed either. When completed, the catalogue will be arranged chronologically by main entry. Indexes for authors, titles, languages, and genres will assist researchers in using the work.

The difficulties of communicating across cultural, ideological, and linguistic boundaries played a role in relations between natives and Europeans throughout the colonial period. In addition to negotiating practical matters such as trade and the control of territory, Europeans also wished to communicate theological concepts for the purpose of converting Indians to Christianity. These various aspects of colonization contributed to the documentation and utilization of Indian languages in texts printed both in Europe and the Americas.

The early publication of Amerindian languages, often in the form of word lists and brief vocabularies, appeared in accounts of voyages and travels and other records of colonial expansion. Initial word-gatherings were eventually expanded into more comprehensive vocabularies and dictionaries. Missionaries, who often spent years in a region learning the local language, collaborated with native speakers to create these dictionaries as well as grammars. These texts were intended to train others in the indigenous languages in which they would proselytize. In addition to language-learning tools, a variety of religious works were printed in Indian languages to assist in the conversion of indigenous peoples. (A small number of secular texts, such as government documents, were also printed in selected native languages.)

The creation, production, and utilization of these works represent a series of border-crossings and transformations. In addition to the primary geographic and linguistic borders between Europeans and natives, cultural, religious, and technological boundaries were also negotiated. The texts themselves represent a series of transliterations, translations, and transformations from oral (and previously non-alphabetic) language to written word in roman alphabet to the printed page created with European technology. The manner in which many of these works were utilized reflects yet another series of crossings as the printed texts were often read aloud to native speakers as part of the conversion process. Finally, the printing history of these books also reflects the transportation of European printing technology to the Americas as well as the movement of Amerindian languages back to Europe for press production there.

I. First Impressions

1A. Francisco de Xerez. *Verdadera relacion de la conquista del Peru.*
Seville, 1534.

Although not containing any word lists or other documentation of Amerindian Languages, this book and this image still serve as a good introduction for us today. The illustrated title page of Xerez's *Verdadera relacion* portrays the historic encounter between the Inca Atahualpa and the Spanish conquerors, led by Pizarro. According to various chroniclers, the Inca was shown a copy of the Bible, with the explanation that it was the word of God.
After examining the book but not "hearing" any words, the Inca summarily dismissed the book by throwing it on the ground in frustration. At this moment, the Spaniards attacked and captured Atahualpa, thus beginning the conquest of Peru. The image and the story symbolize the encounter, the multitude of cultural and linguistic misunderstandings to occur throughout the colonial period, and the conquest of the Americas.

The initial documentation of Amerindian Languages appeared in the form of brief word lists. These are most often found in various histories of the New World, descriptions of particular voyages, and chronicles by settlers, missionaries, and soldiers who spent time in the Americas.

1. Pietro Martire d'Anghiera. *De orbe novo decades.* Alcalá de Henares, 1516.

A member of the Council of the Indies and chronicler for the Spanish Crown, Peter Martyr produced the first official history of the New World. Appended to the 1516 edition, edited by the Renaissance humanist Antonio de Nebrija, is a five page "Vocabula Barbara" that includes words from the Antilles. (Nebrija also provided an appropriate quote for this presentation in his 1492 *Gramatica sobre la lengua castellana*, in which he wrote that "language has always been the companion of empire.")

2. Antonio Pigafetta. *Le voyage et navigation faict par les Espaignolz es Isles de Mollucques. . . .* Paris, [1525].

Antonio Pigafetta's account of the Spanish expedition around the world from 1519 to 1522, under the command of Ferdinand Magellan, includes brief lists of words heard in Brazil and Patagonia. This edition was printed in Paris in 1525.

3. Jean de Léry. *Histoire d'un voyage fait en la terre du Bresil, autrement dite Amerique.* La Rochelle, 1578.

Jean de Léry was a French Calvinist minister who lived in the Rio de Janeiro area in 1556-1557 during an unsuccessful attempt at French colonization in Brazil. This colloquy between a Frenchman newly arrived in Brazil and a native serves as an introduction to the Tupinamba language, including basic grammatical rules and words and phrases useful for travelers. Seen here is the first edition printed in La Rochelle in 1578.

4. Alonso de Ercilla y Zúñiga. *La Araucana.* Madrid, 1590.

Alonso de Ercilla was a courtier and soldier who fought in the Spanish wars against the Araucanian Indians of northern Chile. His epic poem records the history of these battles and the eventual defeat of the natives. In the preface to the first part, published in 1569, Ercilla explains particular terms "which because they are of Indian origin, are not well understood." In this 1590 edition, which incorporates all three parts of the poem, the poet expanded this small list into a glossary of "words and names, which although of indigenous origin, are heard and used so often in that region, that they have not been translated into Spanish."

5. Jacques Cartier. *Discours de voyage fait par le Capitaine Iaques Cartier aux terres-neufues.* Rouen, 1598.

This brief vocabulary of the Huron language consists of words for the numbers one through ten and names of parts of the body. It is appended to an account of Cartier's first voyage to New France in 1534, printed in Rouen in 1598.

This French edition itself represents a series of translation processes, since the text was first published in Venice in 1556 as volume three of Ramusio's *Navigationi et viaggi.* That Italian translation had in turn been based on an unpublished French manuscript.

6. Pablo José de Arriaga. *Extirpacion de la idolatria del Piru.* Lima, 1621.

Arriaga, a Jesuit missionary, wrote about the eradication of idolatry in the Andes following his experiences as a *visitador*, investigating manifestations of indigenous worship. His manual, essentially a How-To book on finding and eradicating native religious activities, included this glossary of 64 words, including terms and objects related to ritual practices.

7. William Wood. *New Englands prospect. A true, lively, and experimentall description of that part of America, commonly called New England.* London, 1634.
Intended to "enrich the knowledge of the mind-travelling Reader, or benefit the future Voyager," Wood's *New Englands prospect* was the first printed, detailed account of the geography and natives of Massachusetts. The five-page Indian vocabulary predates Roger Williams's *A Key into the language of America* by 9 years and John Eliot's "Indian Bible" by 27 years, although both men may have assisted the author in the compilation of this "small nomenclator."

Wood writes that "their language is hard to learn; few of the English being able to speak any of it, or capable of the right pronunciation, which is the chief grace of their tongue . . . They love any man that can utter his mind in their words, yet are they not a little proud that they can speake the English tongue, using it as much as their own, when they meet with such as can understand it, puzzling strange Indians, which sometimes visit them from more remote places, with an unheard language."

II. Dictionaries and Vocabularies

Expanding upon brief word lists, the next stage in the documentation of Amerindian languages was the creation of full-fledged dictionaries and vocabularies. These works were based on the collaboration of Europeans and Indians (although credit, authorship, and main-entry status in library catalogues and bibliographies is almost always given solely to the former). Such books were printed in the New World and in Europe.

8. Alonso de Molina. *Aqui comiença un vocabulario en la lengua Castellana y Mexicana.* Mexico, 1555.

The earliest printed dictionary of any Amerindian language, Molina's vocabulary is arranged alphabetically, translated from Spanish into "Mexicana" or Nahuatl, the language of the Aztecs. The author came to Mexico as a child soon after the Conquest and served as an interpreter between the first missionaries and the natives. In addition to this vocabulary, he also wrote other works in Nahuatl, including a grammar, a *Confesionario breve,* a *Confessionario mayor,* and a *Doctrina christiana.*

9. Domingo de Santo Tomás. *Lexicon, o Vocabulario de la lengua general del Peru.* Valladolid, 1560.

The earliest printed vocabulary for Quichua, the language of the Incas and the indigenous lingua franca of colonial Peru, was printed in Spain in 1560, as printing in Peru did not begin until 1584. The author of this vocabulary was a Dominican priest and the first bishop of Charcas in Peru. The volume also contains his *Grammatica, o Arte de la lengua general de los Indios de los reynos del Peru,* the earliest grammar of the Quichua language.

10. Gabriel Sagard. *Dictionaire de la langue huronne, necessaire à ceux qui n'ont l'intelligence d'icelle, & ont à traiter avec les sauvages du pays.* Paris, 1632.

The first printed Huron dictionary was issued as part of Sagard's *Le grand voyage du pays des Hurons.* The author was a Recollect lay-brother who spent ten months in New France in 1624. His work is considered one of the most informative texts on the Huron language and a major source regarding the Recollect missions from 1615 to their expulsion from New France in 1629.

11. Roger Williams. *A key into the language of America: or, An help to the language of the natives in that part of America, called New-England.* London, 1643.

The earliest book devoted to an Amerindian language printed in English was also the first book published by Roger Williams, the founder of Rhode Island. Dictionaries, vocabularies, grammars, and religious works had already been produced for the native languages of Spanish America and New France, but this was the first such book generated in the British colonies.

The phrasebook is comprehensive in its treatment of Narragansett Indian life. (Note the coverage indicated on the title page.) Williams attempted to cover everything from the essentials of food, clothing, and shelter to customs, government, religion, commerce, and natural history. The author observes in the section on travel that the Narragansetts "are joyfull in meeting of any in travell, and will strike fire either with stones or sticks, to take Tobacco, and discourse a little together."

12. Raymond Breton. *Dictionaire caraibe-françois, mesle de quantité de remarques historiques pour l'esclaircissement de la langue.* Auxerre, 1665.
13. *Histoire naturelle et morale des iles Antilles de l'Amerique . . . Avec un vocabulaire Caraïbe.* Rotterdam, 1658.

Father Breton, a French Dominican who served as a missionary on the island of Dominica, compiled this Carib-French dictionary. A small portion of his work appeared earlier in a 13-page "Vocabulaire Caraïbe," published in Rochefort's *Histoire naturelle et morale des iles Antilles de l'Amerique . . . Avec un vocabulaire Caraïbe.* In the latter work, however, the words were arranged by subjects rather than alphabetically.

Bound with the JCB copy of Breton's Carib-French dictionary is the author's French-Carib dictionary of 1666. In addition, the Dominican wrote a catechism (1664) and a grammar (1667). All of these Carib language books were printed in Auxerre, France.

14. Antonio Ruiz de Montoya. *Vocabulario de la lengua guarani.*
Santa María la Mayor, 1722.

This Guarani vocabulary was printed by the Jesuits' mission press in Paraguay, which operated between 1700 and 1727. It was excerpted, with revisions, from the 1640 Madrid edition of Ruiz de Montoya's *Arte, y bocabulario de la lengua guarani.* The mission press also published an edition of the author's *Arte de la lengua guarani* in 1724.

Here we have multiple examples of border crossings: the dictionary was originally created in the New World but brought back to Europe for its original printing. The actual books were brought back to Paraguay, where they were reprinted on local presses using European technology that had also been transported from the Old World to the New.

15. Johann Anderson. *Herrn Johann Anderson, I. V. D. und weyland ersten Bürgermeisters der Freyen Kayserlichen Reichsstadt Hamburg, Nachrichten von island, Grönland und der Strasse Davis.*
Hamburg, 1746.

The appendix of this description of Iceland and Greenland consists of a brief vocabulary, a grammar, and some statements of Christian faith and prayers, all in Danish, German, and the Eskimo language, except for the grammar which excludes Danish. The work was reprinted in German the following year and was also translated into Dutch, Danish, and French by 1750.

16. M. D. L. S. *Dictionnaire galibi, présenté sous deux formes.* Paris, 1763.

Compiled chiefly from the manuscripts of the Jesuit Pierre Pelleprat, a missionary in Guiana, this dictionary is variously attributed to Simon Philibert de la Salle de L'Etang and M. de la Sauvage. Earlier published Galibi vocabularies by Antoine Biet (1664) and Paul Boyer (1654) were also incorporated. It was issued as part of the Chevalier de Préfontaine's *Maison rustique,* a guide for successful emigration to Guiana, and was also published as a separate work. The author expressed his confidence that the dictionary would be one of the "principal sources of success" for the colony. (Note again where the words are organized by subject rather than in "purely alphabetical" order.)

17. Jonathan Carver. *Travels through the interior parts of North America, in the years 1766, 1767, and 1768.* London, 1778.

In the chapter entitled "Of their Language, Hieroglyphicks, &c," short vocabularies and numerical terms are given for the "Chipéway" and "Naudowessie" languages. Carver, a British captain in the Seven Years War, claimed the former "appears to be the most prevailing [of the native languages of North America]; it being held in such esteem, that the chiefs of every tribe . . . speak this language alone in their councils, notwithstanding each has a peculiar one of their own." At least a dozen English editions, plus French, German, and Dutch translations of Carver's *Travels*, were published before 1800.

III. Grammars and Instructions

An additional element in the documentation and teaching of indigenous languages was the creation of grammars. These most often were produced in the style of grammars then in use in Europe for learning Latin. Early on, many of the European authors expressed their awareness of the limits of this format for explaining such radically different, non-European, languages. However, the motivation to train missionaries in these languages as quickly as possible took precedence over their desire to explain the nuances of exotic languages. It should also be noted that many of the authors, once reasonably fluent, were responsible for the creation of works in other genres, including dictionaries and doctrinal works.

18A. Maturino Gilberti. *Arte de la le[n]gua de Michuacan[n].* Mexico, 1558.
18B. Maturino Gilberti. *Dialogo de doctrina christiana en la lengua de[e] Michuaca[n].* Mexico, 1559.

The first printed grammar of a Native American language was Gilberti's *Arte.* The author was born in France, ordained a Franciscan priest in 1531, and arrived in New Spain in 1542. In addition to this grammar, he also wrote a Spanish-Tarascan/Tarascan-Spanish dictionary and several doctrinal and devotional works in the same language. The language of Michuacan has been called "Tarascan" since the sixteenth century but those who speak it today prefer to call it "Purepecha."

19. Luis de Valdivia. *Doctrina christiana y cathechismo en la lengua allentiac, que corre en la ciudad de S. Juan de la Frontera, con un Confessonario* [*sic*]*, Arte, y Bocabulario breves.* Lima, 1607.

In addition to publishing numerous works in Nahuatl and Quichua, printers in Mexico and Peru also published works for the conversion of natives who lived beyond the borders of the Aztec and Inca empires. For the Allentiac language of the Cuyo region of northern Argentina, the Jesuit Valdivia wrote one of the few studies ever made of the language, accompanied by a short vocabulary, confession, catechism, and Christian doctrine.

20. Melchor Oyanguren de Santa Inés. *Arte de la lengua Japona.* Mexico, 1738.

The publication of language-learning materials in Mexico extended beyond locally spoken dialects to include this grammar printed for missionaries preparing to work in Japan. Not having access to oriental typefaces, the authors and printers reproduced the Japanese words phonetically using roman type.

21. Ildefonso José Flores. *Arte de lengua metropolitana del reyno Cakchiquel o Guatemalico.* Antigua, 1753.

Authors of Amerindian grammars often remarked that the sounds of the native languages could not be adequately conveyed using standard roman typefaces. In his Cakchikel grammar, Flores attempted to introduce additional symbols to convey the proper pronunciation.

22. Horacio Carochi. *Compendio del arte de la lengua mexicana.*
Mexico, 1759.

This second, abridged edition of Carochi's *Arte* included additions by Ignacio de Paredes, sometime superior of the Jesuit seminary at Tepotzotlan and rector of the college of San Andrés in Mexico. The copperplate engraving of St. Ignatius of Loyola instructing the peoples of the world also served as the frontispiece to Paredes's 1759 *Promptuario manual mexicano,* a work containing 52 sermons and 40 moral discussions in Nahuatl.

23. John Eliot. *The Indian grammar begun.* Cambridge, 1666.

With the assistance of a native interpreter, Eliot wrote this introductory grammar to the Massachuset language for the officers of The Society or Company for the Propagation of the Gospel in New England and the Parts Adjacent in America. The printer, Marmaduke Johnson, was also involved in the production of the New Testament (1661) and the Bible (1663) in the same native language. He was assisted by an Indian known as James Printer, whose knowledge of Massachuset clearly contributed to the production of these works.

24. David Zeisberger. *Essay of a Delaware-Indian and English spelling-book, for the use of the schools of the Christian Indians on Muskingum River.* Philadelphia, 1776.

Zeisberger was born in Moravia in 1721 and served as a missionary in North America from 1740 until his death in 1808. In addition to this introduction to the Delaware language, he also produced a trilingual dictionary in German, English, and Delaware.

The author expressed dissatisfaction with this publication of his work as four articles in his original manuscript (including reading lessons, conjugation examples, the Delaware numbers, and a short history of the Bible) were omitted and apparently replaced with the Lord's Prayer, the Ten Commandments, and a short litany, all in Delaware and English.

25. Daniel Claus. *A primer for the use of the Mohawk children.* London, 1786.

After introducing alphabets and vocabularies, the remainder of this primer is devoted to Christian doctrine and prayers, with the English and Mohawk languages on opposite pages. The engraved frontispiece depicting Indian children in a classroom represents the intention of the work stated on the title page: "To acquire the spelling and reading of their own, as well as to get acquainted with the English, Tongue." Claus, Deputy Superintendent of Indian Affairs in Canada for the British government, also translated *The order for morning and evening prayer, and administration of the Sacraments, and some other offices of the Church of England* into Mohawk. This second edition was printed in London in 1786, five years after the first edition was published in Montreal.

IV. Sacred Texts and Doctrinal Works

The goal of all of these good labors, for the missionaries, was the translation of sacred texts and doctrinal works into the native languages and their dissemination in printed form. As with the grammars and dictionaries, it is important to recall the role that bilingual native translators played in the creation of these texts. (Also remember that the transformation of these texts continued after publication as they were often read aloud to others as part of the conversion effort, rather than silently to oneself.)

26. Juan de la Cruz. *Doctrina christiana en la lengua guasteca co[n] la lengua castellana.* Mexico, 1571.

Juan de la Cruz's *Doctrina christiana* is the most profusely illustrated book printed in Mexico in the sixteenth century. The text contains 73 separate woodcuts, some used multiple times to bring the total number of illustrations to 130. Nearly all of the illustrations had been used previously, either in Maturino Gilberti's 1558 *Thesoro spiritual en lengua de mechuaca[n]* or Pedro de Feria's 1567 *Doctrina christiana en lengua castellana y çapoteca.*

Created expressly for this work, however, were the woodcuts of hands. The insertion of type-printed labels on the fingers allowed this mnemonic device to be used throughout the book to assist the teaching of religious concepts such as the Sacraments, the Seven Deadly Sins, and, as shown here, the Ten Commandments.

27. Catholic Church. Province of Lima. Provincial Council (1583). *Confessionario para los curas de Indios.* Ciudad de los Reyes [Lima], 1585.

This trilingual *Confessionario*, written by order of the Provincial Council of Lima of 1583-1584, was the second book printed in Lima. Written in Spanish, Quichua, and Aymara, it provided missionaries with texts enabling them to conduct confessions in two of the languages spoken in the Inca Empire. This copy is bound with two other early trilingual religious works: *Tercero cathecismo y exposicion de la doctrina christiana, por sermones* (Lima, 1585) and *Doctrina christiana* (Lima, 1584).

28. Bernardino de Sahagún. *Psalmodia christiana.* Mexico, 1583.

The Franciscan Bernardino de Sahagún was assisted by four Nahua scholars in producing this hymnal, the only Nahuatl songbook printed in Mexico during the colonial period. The hymns were mostly derived from the liturgy and the lives of the saints. The native assistants' participation included translating texts from Spanish and Latin, refining the friar's Nahuatl, and typesetting.

29. Juan Perez Bocanegra. *Ritual formulario, e institucion de curas, para administrar a los naturales de este reyno.* Lima, 1631.

The kinship diagram of the Inca genealogical system indicates the general rules for both acceptable and prohibited marriages: relatives may marry only at the generation of great-great-grandchildren. While representing native Andean concepts and terms, the shape and form of this diagram (without the specific Quichua terminology) may also have been based on medieval European traditions for constructing genealogical models. This bilingual manual for priests administering to Indian populations in the Andes includes instructions on conducting baptisms, confirmations, the eucharist, and confessions.

30. Lodovico Vincenzo Mamiani della Rovere. *Catecismo da doutrina christãa na lingua brasilica da naçáo Kiriri.* Lisbon, 1698.

In addition to narrative texts, dramatic and musical performances were also found by the missionaries to be useful teaching tools. These songs in the Kiriri language of Brazil were intended for native choirboys. This catechism also includes essential teachings and prayers such as the Ten Commandments, the Pater Noster, and the Ave Maria. The text, presented in Kiriri and Portuguese in parallel columns, was printed in Lisbon in 1698, as there was no printing in Brazil until the early nineteenth century.

31. Bible. Massachuset. Eliot. 1663. *Mamusse wunneetupanatamwe up-Biblum God.* Cambridge [Mass.], 1663.

The Society for the Propagation of the Gospel amongst the Indians in New England was responsible for one of the landmarks of early printing in the British colonies. The "Eliot Indian Bible" is the first Bible printed in the New World, and the first example in history of the translation and printing of the entire Bible into a new language (Massachuset) as a means of evangelism. Eliot had previously produced the New Testament in the Massachuset tongue, also printed in Cambridge, Massachusetts, in 1661. In all of these achievements he had the assistance of native translators.

32. Martin Luther. [Kleine Katechismus. Delaware and Swedish]
Lutheri catechismus, öfwersatt på American-Virginiske språket.
Stockholm, 1696.

Luther's *Der kleine Catechismus* was translated into the Delaware, or Lénni-Lenâpé, language by the Swedish missionary Johan Campanius and edited by his grandson Thomas Campanius Holm, the first Swedish historian of the colony of New Sweden. The work was printed at royal expense, expressly for the purpose of converting the Amerindian population. In addition to the religious teachings, the volume also includes a glossary of Delaware words.

33. José Agustín Aldama y Guevara. *Alabado en lengua mexicana.* Mexico, 1755.

While many major products of the colonial press have been show today, other less imposing works were also printed in indigenous languages. One example is this broadside. Printed in Nahuatl in Mexico in 1755, it is a religious hymn that honors the Virgin of Guadalupe, the story of whose apparition aided friars throughout the colonial period in their attempts to convert the native populations. The author's *Arte de la lengua mexicana,* a synthesis of earlier grammars, was also published in Mexico in 1754.

34. Church of England. [Book of Common Prayer. Mohawk. 1787]
The book of common prayer and administration of the sacraments, and other rites and ceremonies of the church, according to the use of the Church of England. London, 1787.

The first translation into Mohawk of *The Book of Common Prayer* was printed in New York in 1715, with later editions appearing in 1769 and 1780. This first illustrated edition, printed in parallel Mohawk and English, was revised by Daniel Claus, Deputy Superintendent of Indian Affairs in Canada for the British government, and printed for the Society for the Propagation of the Gospel. In addition to this frontispiece of George III's reception of the Mohawk delegation to London, the volume contains eighteen engravings depicting biblical themes.

V. Secular Texts

While the great majority of religious texts, vocabularies, and grammars were produced with missionary motives in mind, some secular works were also produced during the colonial period. One fascinating example is this broadside printed in Buenos Aires in 1813.

35A and 35B. Argentina. *Decreto. La Asamblea general sanciona el decreto expedido por la Junta Provisional Gubernativa.* Buenos Aires, 1813.

This quadrilingual document of Argentina's General Assembly ratifies the September 1, 1811 decree of the Junta Provisional Gubernativa that freed the Indians from church-related tributes and *encomienda* and *mita* obligations. It is printed in double-column format on 2 sides in Spanish, Aymara, Quichua, and Guarani.

36. Mexico. *Don Francisco Xavier Venegas de Saavedra . . . Ayamo moyolpachihuitia in Totlatocatzin Rey D. Fernando VII.* Mexico, 1810.

This government broadside printed in Nahuatl declares the cessation of tribute payments by the Indians of Mexico to the King of Spain. The decree was enacted in reaction to the Hidalgo revolt of 1810, which had wide support among the native population.

Conclusion

In today's presentation, a full-range of printed works that include Amerindian Languages have been discussed. These vary from the briefest of word lists and specimens to full-fledged dictionaries, grammars, Bibles, and doctrinal works. These printed works not only document, admittedly through a series of transliterations, translations, and inevitable transformations, indigenous languages as spoken centuries ago. They also serve as evidence of the very real interaction and communication between Europeans, colonists, and the indigenous peoples throughout the Americas.

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The Introduction and Early Use of Lithography in the United States

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Just over two hundred years ago, between 1796 and 1798 in Germany, Alois Senefelder developed a new means of reproduction that became known as lithography. His initial discovery was rather serendipitous, and the first commercial application of the technology was for the printing of hand written plays and music. Senefelder realized the commercial importance of his discovery and soon exported the technology to England, France, and Italy through a system of licenses. Within a decade, lithography reached American shores; the earliest experiments occurred in New York. As early as 1808, the National Intelligencer and Washington Adviser announced that "Dr. Mitchell of New York received a lithographic stone and inks from Paris and made some experiments in this new art."[1] Unfortunately none of Dr. Mitchill's experiments are known to survive. The American Philosophical Society received a German lithographic stone in 1818 from the publisher Thomas Dobson so that its members could experiment with the new technology.[2] Bass Otis was one of those artists who experimented with the stone; he produced several prints in Philadelphia that have the appearance of being something other than traditional intaglio prints. For example, the portrait of Abner Kneeland that appeared in 1818 as the frontispiece to his Series of Lectures and the mill scene in the July 1819 issue of The Analectic Magazine that bears the inscription, "Bass Otis Lithographic" share certain technical characteristics.

That lithography came to the United States from France is of great interest and reflects, perhaps, an enlargement of American relationships with European countries. Earlier printmaking techniques--both relief cuts and intaglio processes--came to the American colonies from Great Britain. American print publishers, acting as entrepreneurs, brought skilled French immigrants to the United States together with printing equipment and stones. Others traveled to France and learned the basic skills required.

The early expectations for lithography were high. In the pages of the Western Review & Miscellaneous Magazine edited by William Gibbes Hunt in Lexington, Kentucky, it was suggested that lithography would "save the labor, the delay and the expense of engraving. It will furnish the most perfectly made copies without the possibility of an error." The editor of the American Journal of Science and Arts wrote: "The great recommendation of lithography is the comparative cheapness and dispatch, with which designs are executed by it." In the Boston Monthly Magazine, it is recommended as "of great importance to the world."[3] One question we should ask is whether the new technology completely lived up to these enthusiastic expectations.

What interests me about the introduction of lithographic technology into the American print-producing industry is how it competed against the existing technologies for the production of images--relief prints and copper-plate engravings. The ongoing assumption always seems to be that new technology supplants older technologies. Was this the case for lithography? Although lithography successfully competed against intaglio printmaking technology for the production of separately published prints, it did not do so for the production of book and periodical illustrations. Examining the reasons why lithography did not become the preferred medium helps us understand a great deal about the production of illustrations and the needs of publishers.

Let us begin by looking a couple of examples of eighteenth-century book illustrations. Among the most commonly found genre of prints were portraits of authors. On the left is James Hodder, the author of Hodder's Arithmetick published in Boston in 1719. This was copied by James Franklin (1697-1735) as a relief cut from an English engraving.[4] On the right is James Turner's engraving of Dr. Isaac Watts published as the frontispiece to his Sermons on Various Subjects issued in Boston in 1746. The portrait of Hodder was incised on a plank of wood. James Franklin gouged out the areas that print as white, leaving the lines to be printed to stand out in relief. The portrait of Hodder is actually very bold and decorative. This medium had two distinct advantages. First the materials were inexpensive. Wood or the alternative material for the matrix--type metal--was easily found and the ink that used was printer's ink. Knives and gouges were used to remove the area around the lines. Secondly, the relief cut, whether made of wood plank or type metal, could be placed in a form and printed with type. Copperplate engravings, as suggested by the portrait of Dr. Watts, were finer, but the technique required greater expertise and was more expensive both in terms of materials and labor. Instead of wood, the print was made on a very smooth, polished copperplate. Special tools were required to incise the lines into the plate. The engraver had to be skilled to apply the correct amount of pressure to achieve a range of tones. Deeper lines retained more ink when printed than shallow lines that printed paler. The printer, usually not the engraver, used an ink formulated for engravings, forced the ink into the incised lines, and then removed excess ink from the plate. Engravings required a specialized press that exerted a substantial amount of pressure. Illustrations printed as engravings were usually inserted at appropriate places in the text block; rarely was an engraving printed on a sheet that had been printed letterpress.

Another pair of examples will illustrate these factors well with different subject matter. On the left is an illustration of Franklin's fireplace design from his Account of Fireplaces printed in 1744. Note how the printer was able to place the printed explanation adjacent to the text. On the right is an engraving by Paul Revere for Edmund Quincy's Treatise of Hemp-Husbandry published in Boston in 1765. The explanatory text is printed as part of the pamphlet's text.

Until the nineteenth century, these were the two technologies available for printing book illustrations. Relief blocks were printed in large numbers in inexpensive books and pamphlets, particularly almanacs and children's books. Engraved illustrations were used for books intended for a wealthier, elite clientele. From the 1820s we can contrast a hand-colored engraved illustration from Thomas Say's American Entomology and Constantine Rafinesque's Medical Flora of 1828. In the latter book, Rafinesque commented that "Works of general utility ought to be accurate, complete, portable and cheap. . . . The popular knowledge of the natural sciences has been prevented in the United States, by the first works published on them, having followed the model of the splendid European publications intended for the wealthy."[5] Say's book on insects, Alexander Wilson's American Ornithology, and William P. C. Barton's Vegetable Materia Medica of the United States are among the elegantly illustrated and costly productions to which Rafinesque was referring.

Lithography had its own advantages and disadvantages. From the first, it became apparent that no special skills, beyond the ability to draw or write, were required to create an image on the matrix. Novices and professional artists used lithography to produce original designs. However, specialized equipment was required. The only satisfactory material for the production of lithographs was limestone imported from Solnhofen, Germany. Americans tried to find native stone, one print in the collection of the American Antiquarian Society was even printed on Vermont marble, but the imported stone was the best. Kentucky limestone was also suggested as an alternative.[6] Special drawing materials were required. Waxy crayons or ink were chosen because they reacted with the lime in the stone, producing an insoluble lime soap which received ink but repelled water at the time of printing. Finally, the press required to print lithographs was different from others. It had a scraper bar, seen in this lithograph published late in 1876 by Louis Prang and Company.

By using the thoroughly catalogued collection of imprints issued during the 1820s at the American Antiquarian Society, we can identify about 150 that have lithographed illustrations in addition to periodicals illustrated lithographically. Almost all of the lithographs in these books relate in some way to the practice of lithography in France.

The earliest of this group of books is The Children's Friend, Number 3, unique because both text and image are lithographed. The illustrations have been attributed to Arthur J. Stansbury (1781-c. 1845), a licensed preacher and illustrator. Ironically, the title page refers to the illustrations as "engravings," but it also says that they "are engraved in a method entirely new." In any event, the whole pamphlet is lithographed, circumventing the problem of incompatibility of type and lithographed image. Only two copies of this pamphlet are known, and no copies of the predecessor to this item, Children's Friend, numbers one or two are known. The closest parallel to this publication are the Philadelphia productions of William Charles and the firm of Johnson and Warner, whose children's books feature engraved text and handcolored images, as seen in this opening from My Governess published in 1818. The use of lithography to produce the Children's Friend is an attempt to reproduce engravings inexpensively. In both cases, the coloring is applied by hand after printing.

The lithographs for a Children's Friend and a handful of others were printed by the first commercial firm that produced lithographs in the United States formed by William Armand Barnet and Isaac Doolittle in New York in 1821. They also printed illustrations for James E. Smith's Grammar of Botany and Benjamin Silliman's American Journal of Science and Arts in 1822. Barnet & Doolittle learned their craft in Paris. Barnet was the son of the American consul in Paris. The American Journal of Science and the Arts in October 1821 reported that they "availed themselves in Paris of a regular course of practical instruction" and brought the skills and materials and press to New York.[7] The same article also noted that they brought back French lithographs. The firm did not remain in business long and few of their separately published prints or illustrations survive. These two images do demonstrate the usefulness of lithography for the depiction of botanical subjects and technical illustration.

A certain amount of zoological illustration was produced lithographically. One of the earliest scientists to practice lithography in America was the French naturalist, Charles Alexandre Lesueur. He produced a number of drawings that were reproduced in the pages of the Journal of the Academy of

Natural Sciences, including this image of Chichla published in 1822. Lesueur's lithograph was really very experimental, done at a time in Philadelphia when there was not a commercial lithography establishment. The stone was sent to New York to be printed by Barnet & Doolittle.[8] Unfortunately the image lacks precision and definition, probably because Lesueur was not experienced with the technology. He may well have lacked a crayon of a hard enough consistency. Also, the successful practice of lithography was partially dependent on dry conditions. Too much humidity created difficulties for the artist drawing on stone and for the printer.[9]

Barnet and Doolittle faced several difficulties. They were only able to print 100 to 150 impressions a day, which drove up their prices so that they could not compete with copperplate printers. They printed some illustrations for Charles Alexandre Lesueur that cost twice as much as printing the same subject on a copperplate. Business became so difficult that they offered to sell their equipment to him for $1000.[10] Lesueur did not accept this challenge and business folded by June 1822.

What happened to the press and other equipment owned by Barnet & Doolittle? It could be that Peter Maverick acquired it. Maverick began printing lithographs for the publisher of the Annals of the Lyceum of National History of New York in 1824.[11] Among those who drew for him were his two daughters, Emily and Maria, and Arthur J. Stansbury whose work had been printed by Barnet & Doolittle. Maverick also at this time printed copperplate engravings; lithography never supplanted that aspect of his work. He did, however, publish several separately published lithographs that survive.

Anthony Imbert (1794/5-1834) became the foremost lithographer in New York beginning in 1825. Imbert had served in the French Navy and may have come to the United States as a member of the entourage surrounding the Marquis de Lafayette who toured American in 1824.[12] His first major project was Cadwallader Colden's Memoir ... Presented to the Mayor of the City, at the Celebration of the Completion of the New York Canals, issued by the City of New York to celebrate the completion of the Erie Canal in 1825. Among the artists involved in this mammoth undertaking was George Catlin, better known for his portraits of native Americans.

Among the projects that was designed to further knowledge about America's history was Thomas McKenney's Sketches of a Tour to the Lakes published in Baltimore by Fielding Lucas in 1827. At that time there was not a lithographer in that city, and the publisher turned to the experienced New York lithographer, Anthony Imbert, and the Pendleton firm in Boston for the illustrations. Among the plates were the "Indian Canoe" and a portrait of Kay-Way-No-Wut. The canoe was copied by a Lt. Farley of the United States Topographic Bureau from a model of the original by a native Chippeway. In Boston, the draftsman Moses Swett copied Farley's sketch for the lithograph. The other plate was drawn by Mr. McCleary of the garrison at Sault de St. Marie and was "said to be excellent."[13] These illustrations were prepared for a book designed to be popular and not among the finest published by Fielding Lucas, recognized as a publisher of elegant books during the 1820s. Among his best productions was Lucas' Progressive Drawing Book of 1827 featuring nineteen aquatints by John Hill after drawings by John Hazlehurst Boneval Latrobe and twenty engravings by others. The price was $12.00, which placed it in the luxury class at the time.

Imbert lithographed two technical illustrations including two images on one plate: "Sketch to explain the nature of a railroad" and "Sketch of the steam carriage employed on the Hetton rail-way" for Thomas Tredgold's Practical Treatise on Rail-Roads and Carriages (New York: E. Bliss and E. White, 1825). The use of new technology to publicize new inventions seems particularly appropriate.

Imbert also anticipated preparing a publication on lithography, but it never came to fruition.[14] He did issue illustrations for a number of publications including C. S. Stewart's Private Journal of a Voyage to the Pacific Ocean, and Residence at the Sandwich Islands (N.Y., 1828), The American Toilet, a small volume consisting of twenty lithographed leaves, a novelty book which pairs objects with virtues.

One ambitious project never came to fruition. Alexander J. Davis, who had received training as a lithographic draftsman in Boston in the Pendleton firm, would be responsible for the drawings for Views of Public Buildings, Edifices and Monuments in the Principal Cities of the United States. The first four lithographs, views of New York buildings, appeared in August 1827. A second set of New York views appeared in October; the others never appeared. Another project that faltered was a drawing book with plates drawn by another French artist, Edme Rousseau, a miniature and portrait painter working in between 1826 and 1830. Several plates survive, but no complete copy.[15]

A third lithographic firm established in the 1820s that relied on French expertise was that of William and John Pendleton. Theirs was the first commercially successful firm. Among their first efforts was a series of portraits of the first five American presidents, published by John Doggett, the owner of a looking glass and carpet warehouse in Boston. Doggett exhibited the original paintings by Gilbert Stuart in 1822 and proposed to issue prints based on them. Several years passed before John Pendleton went to Paris with the paintings and returned with lithographic stones bearing the drawings of the presidents by Nicholas-Eustache Maurin, the printing equipment and an experienced French pressman.

The company remained in business as a partnership until 1829 when John moved to New York to establish his own firm. William Pendleton was active until 1835 when he sold the business to Thomas Moore. The Pendleton firm was praised by Benjamin Silliman in 1830 for "aiding the progress of science and the arts, in this country."[16] We can see their contributions by looking at several of their book and periodical illustrations.

One of their major projects was to print the illustrations for William Eliot's Description of the Tremont House (Boston: Gray and Bowen, 1830) which includes one engraving by the firm of Annin & Smith after a drawing by James Kidder and thirty lithographed plates. The engraved frontispiece adds elegance and formality to this book which consists of explanatory text and plates detailing the architectural ornamentation of the new hotel featuring many innovations in terms of sanitation and comfort.

Among the scientific works that the Pendletons supplied illustrations for was James Paxton's Illustrations of Paley's Natural Theology published in Boston in 1827. The illustration of the opposum should be compared to a copperplate engraving in J. D. Godman's American Natural History published in Philadelphia between 1826 and 1828. The lithograph lacks clarity and definition, but it must be admitted that the expense of copperplate engravings often impeded the publication of scientific literature.[17] The economies of lithography made publishing scientific literature possible, particularly before state and federal government subsidies.[18]

An important publication that falls between science and art was A Compendium of Picturesque Anatomy issued by the artist John Rubens Smith. Smith had drawn a remarkably beautiful portrait for Barnet & Doolittle in 1822 so he was not a stranger to the lithographic stone. In the preface, Smith notes that he adapted the plates from a work published in 1660 by Chrysostome Martinez, a Spanish artist who was a student in the College of Montaigu in France. Smith compiled his version to make up for the lack of anatomical studies for American artists. Thie first number consisted of four plates and sold for $2.00. The other two projected numbers never appeared.

Among their artistic productions was a small pamphlet, Rembrandt Peale's Lithographic

Sketches. Memoranda of Form & Character issued in late 1826 or early 1827. It contains eight lithographs, each adhered to a sheet with letterpress titles above and imprint and text below. "The Pier Head" is a lovely marine subject showing a range of tones. Peale could really manipulate the materials to achieve, for example, the translucence of the ocean's wave. "The Soldier's Birth-Right" was copied from a lithograph by Nicholas Toussaint Charlot entitled Y Dit que vous avez une jambe de bois de nassance. It is possible that Peale derived several other of the vignettes from French prints. Another artist working with him at the Pendleton's at the same time, David Claypoole Johnston, owned several other prints by Charlot.

An important scientific book copied from a French publication was Nathan R. Smith's Surgical Anatomy of the Arteries (Baltimore: J. N Toy and W. R. Lucas, 1830). It contains eighteen plates copied from a French anatomical work. These were printed in Baltimore by the firm of George Endicott and Moses Swett, who learned lithography in Boston at the Pendleton firm. Even the market for medical literature in the 1830s was a limited one. Earlier anatomies were produced with copperplate engravings--beautiful, but expensive. Interestingly, the format for Smith's book is large. It measures about twelve inches in height. The larger format makes the great detail possible. The most successful of later scientific books illustrated with lithographed images would share this large format.

William and John Pendleton, like many of their contemporaries, worked in two different ways. On the one hand, they issued their own separately published prints. They also served as job printers, accepting commissions from books publishers and others, including merchants who needed views of their stores or products. Artists of considerable talent produced the finest of the separately published prints and it is this contribution to American art that Silliman praised in 1830. However, some of the work produced for book and periodical publishers falls into this category as well.

Some literary magazines featured illustrations. Mrs. Katharine A. Ware, the editor of The Bower of Taste published in Boston in 1828 and 1829 wrote: "We have at considerable additional expense, presented in our last volume, four plates, all expressly designed and executed for our paper, and the encouragement offered by the public, the same number will be furnished for the ensuing year." Typical of the plates in this magazine are the "Insane Hospital" drawn by Mrs. Margaret Snow and "The Pirates" drawn by Thomas Edwards. Lithographs by Mrs. Snow were praised in The Bower of Taste for the "peculiar softness in her style, a smoothness in the gradations of light and shadow, that give her prints the appearance of finished engravings."[19] Note that the two media were compared and it is suggested that engraving is the more elegant and acceptable of the two. The illustration on the right was created to accompany a prize winning story. Although this image is well enough drawn, the scale is small, and crayon lithography is not suited for this scale, although occasional draftsmen can create pleasing images in spite of this factor. Probably harder crayons were not available. Interestingly, although the Pendleton firm had already published a several dozen competent bust-length portraits, the portrait that appeared in this biography was a copperplate engraving by John B. Longacre after a Gilbert Stuart portrait.

Artists found that lithography was a perfect medium for the production of inexpensive topographical views. Aquatints such as those by John Hill for Picturesque Views of American Scenery published from 1819 to 1821 were issued in limited numbers; probably fewer than one hundred impressions of these prints were produced. The image of each measures about 13 by 9 inches. The publishers originally advertised that thirty-six views would be issued; only nineteen plates were published. In the decade of the 1820s, however, small lithographed illustrations were not very successful. Among the least skilled is this example by Daniel Wadsworth for Theodore Dwight's Sketches of Scenery and Manners in the United States published by A. T. Goodrich in 1829. Many small topographical views seem to suffer from a lack of focus because the crayons were too soft.

Ironically, this quality was an asset when used for the production of larger format prints to be framed and the best of them could be elegant like Cephas G. Childs' The Natural Bridge or Catherine Scollay's Fourth View of Trenton Falls.

One interesting aspect of some of the illustrated books issued in this decade is that two or even three media are used in a given volume. For example, David Hosack's Memoir of DeWitt Clinton (New York: J. Seymour, 1829) contains two engraved plates, including an elaborate arrangement of portrait heads, and one lithographed plate--the "Map of the Nortern [sic] and Western Canals of the State of New York." Many maps were produced during the decade of the 1820s both as book illustrations and as separately published items.

Another book with both engraved and lithographed plates was George Bourne's Picture of Quebec published in New York by the author in 1830. James Smillie engraved this plate of the Chapel of the Holy Trinity and the Episcopal Church. These vignettes are just an inch or so in height; Smillie's skill was amazing. Lithographers were not able to produce such fine images. The map, however, was lithographed by Prosper Desobry of New York, who most likely was French born. Maps were well suited for lithography because of the necessity of combining text and line. Engraved maps were both slower and more expensive to produce. The printed boards of the cover of the Picture of Quebec have a relief cut ornament.

Did the new technology eclipse intaglio or relief processes in later decades in the production of book illustrations? The answer is a resounding negative. In spite of its relative cheapness and speed of production, the images could not be printed in conjunction with text. For the illustration of popular literature, stereotyped relief blocks became the preferred medium. This technology was first used in the second decade of the nineteenth century and became widespread during the 1820s and later. Michael Winship, in his article on "Printing with Plates in the Nineteenth Century" summarized the widespread use of this technology: "The technique was quickly applied to books that were in regular demand, such as Bibles, catechisms, and textbooks, which formerly had been printed from standing type. During the 1820s popular works of literature, such as those of Walter Scott, James Fenimore Cooper, and Washington Irving, were also stereotyped. By 1834 the firm of Harper & Brothers had published 234 titles, a total of 413 volumes. Of that number 192 volumes, of 46 percent, were stereotyped."[20] Relief blocks were stereotyped along with the text. When the era of pictorial journals arrived in the 1840s, publishers again turned to relief prints for the creation of images.

Lithographs were still produced by book publishers, but for limited purposes, particularly for scientific and technological literature. The audiences for these books were relatively small, in the two or three thousand copy range, as opposed to the 100,000 copy range. Although up to 100,000 impressions could be taken from a stone, they still had to be printed separately from the text, and this step created a burden for binders, and extra expense for the publishers. Because of the possibilities of such large editions, however, job printers, map, print, and music publishers continued to use lithography for their specialized needs, so the medium had a long and important history in the production of images in nineteenth-century America.

End Notes

1. Notice in The National Intelligencer and Washington Adviser, Jan. 8, 1808, quoted by Peter Marzio in "American Lithographic Technology before the Civil War," in Prints in and of America to 1850, John D. Morse, ed. (Winterthur: The Henry Francis du Pont Winterthur Museum, 1970), p. 221. Philip J. Wimerskirch also comments on Mitchill in his article, "Lithographic Stone in America," in Printing History 11 (1989): p. 3.

2. Marzio, "American Lithographic Technology," p. 221; Analectic Magazine 14 (July 1819): 67.

3. Western Review & Miscellaneous Magazine 1 (August 1819): ; American Journal of Science, and Arts 4 (October 1821): ; Boston Monthly Magazine 1 (December 1825): 378.

4. Wendy Wick Reaves, "Effigies Curiously Engraven: Eighteenth-Century American Portrait Prints," in Georgia Brady Barnhill, Prints of New England (Worcester: American Antiquarian Society, 1991), p. 42

5. Constantine S. Rafinesque, Medical Flora (Philadelphia: Atkinson and Alexander, 1828), p. vii.

6. Western Review & Miscellaneous Magazine 1 (August 1819): ; Analectic Magazine 14 (July 1814): 68.

7. American Journal of Science & Arts 4: (October 1821): .

8. George H. Eckhardt, "Early Lithography in Philadelphia," Antiques 28 (Dec. 1935): 252.

9. In 1831 William Pendleton wrote a letter to Ralph E. W. Earl about the difficulties of drawing a portrait of Andrew Jackson on stone in a spell of rainy weather . He explained that "the alkali of the Crayons absorbed so much moisture as to diffuse its qualities with those of the other components of the Crayons below the upper, down to the lower surface of the Stone. This was not perceptible prior to printing but immediately upon subjecting the Drawing to the chemical processes which prepare it for being printed from it became apparent and the blurry heavy appearances particularly about the Dress are irremediable consequences." Quoted in the author's article, "Political Portraiture: Two Prints of Andrew Jackson" in The American Art Journal 18 (no. 4): 92.

10. Sally Pierce, Catharina Slautterback and Georgia Brady Barnhill, Early American Lithography, Images to 1830 (Boston: The Boston Athenaeum, 1997), 12.

11. Pierce, Slautterback, and Barnhill, Early American Lithography, 12.

12. John Carbonell, "Anthony Imbert, New York's Pioneer Lithographer," in Prints and Printmakers of New York States, 1825-1940, David Tatham, ed. (Syracuse: Syrcuse University Press, 1986), 11-12.

13. Thomas L. McKenney, Sketches of a Tour to the Lakes (Baltimore: Fielding Lucas, 1827), pp. 201 and 327.

14. Cabonell, "Anthony Imbert," 19.

15. Carbonnel, "Anthony Imbert," 15-16.

16. American Journal Science and the Arts (Jan. 1830): 212.

17. Several case studies are presented in Georgia B. Barnhill's "The Publication of Illustrated Natural Histories in Philadelphia, 1800-1850" in The American Illustrated Book in the Nineteenth Century, Gerald W. R. Ward, ed. (Winterthur: The Henry Francis du Pont Museum, 1987).

18. See Ann Shelby Blum's Picturing Nature: American Nineteenth-Century Zoological Illustration (Princeton: Princeton University Press, 1993) for a thorough analysis of this subject.

19. The Bower of Taste 1, no. 12 (March 22, 1828): 190.

20. Michael Winship, "Printing with Plates in the Nineteenth Century," Printing History 5 (1983): 23.

67th IFLA Council and General Conference
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Achievement: From a Lack of Knowledge to an Appreciation of Deaf History

Alice L. Hagemeyer
founder of the Friends of Libraries for Deaf Action (FOLDA)

When John Day asked me to share my experiences with you on this Open Forum theme - Achievements: Libraries Change Lives - I told myself you are first going to hear about the impressive achievements of the deaf community which have changed society. Although there is a long list, I will highlight a few. The world's first public school for deaf people was established in Paris, France In 1735, the first one in the world. A second school was established in Rome in 1784. I do not know if any public school for hearing people had yet been established. I do know there were none in the U.S. when, in 1816, the Rev. Thomas H. Gallaudet, went from there to England and France to study methods for teaching deaf children. Bringing back with him Laurent Clerc, a deaf teacher from Paris, the two men - with the financial backing from a hearing parent a deaf child - helped start and run the first public school for deaf students in the United States. This school for the deaf eventually gave some ideas to two educators in the U.S., who eventually established public schools for blind students and hearing students, respectively, in the late 1830s.

A second important contribution was the telephone. In 1876, Dr. Alexander Graham Bell, a teacher of deaf children and husband of a deaf woman, worked on devices to help deaf people hear. He did not succeed in this endeavor, but did invent the telephone. It was a wonderful device, but - ironically - unavailable to deaf people for almost 100 years, until a deaf man invented a device that enabled deaf people to have telephone access.

The third item I will mention here really consists of multiple contributions. Thomas Alva Edison, as is well known, said that his deafness was an asset and contributed to his success in developing numerous patents, including those inventions that benefit the library.

There is one more important contribution. I think everyone should recognize. In the closing years of the 20th century, a deaf man, Vinton Cerf, and a small group of his science colleagues developed the Internet.

For many years, I, along with a group of library friends have been encouraging both the deaf and library communities to take deaf history seriously. We are continuing our efforts in this direction.

Incidentally, in the coming month, the last week of September, deaf delegates from all parts of the world will meet in Rome, Italy, to celebrate the 50th anniversary of the founding of the World Federation of the Deaf (WFD). This is the oldest global organization serving people with disabilities.

The WFD has been interested in the IFLA for a long time and has worked closely with John Day and other librarians who are concerned with library access for all. The WFD initiated an annual event in 1958, known as the International Week of the Deaf, which is observed in the last full week of September. If you want to start including the needs of deaf people in your current library program, observance of this week might be a good beginning. The WFD has a fact sheet about the week and will encourage deaf people to get involved with their local library. I have personally gone from knowing very little or nothing about deaf history to having a deep appreciation for it. Even though I am now a librarian, myself, I never knew about deaf history until after I started graduate school for my masters in library and information science in midlife. Many library colleagues and also members of the deaf community, especially young deaf people, when learning of my profession, assume that I have read many books and know all about deaf history because I used the library all my life. This is not true.

I grew up in rural Nebraska and Wyoming (Central USA). My parents never took me to a public library. I do not remember if I ever saw them reading a book, but I do remember their being "glued" to the radio, to which I naturally had no access. This is the way they kept up with world events. The only reading materials I could find at home were newspapers. I read everything in them. One grandfather, himself having a hearing loss, took a special interest in me. He would take me aside and encourage me to read his large piles of magazines that were mostly Colliers (now no longer in existence). Grandpa and I communicated through writing. Even though he had a hearing loss, I, oddly enough, never considered him a part of my deaf world because he did not use sign language.

I attended a residential school for the deaf in Omaha, Nebraska, 500 miles away from home. This school forbade the use of sign language in the classroom and even asked parents not to learn it. No one at the school knew why, but eventually many of us learned the reason in 1981 from the book, "Deaf Heritage," by Jack R. Gannon. This first-ever published narrative history about Deaf America told us about the international educators' meeting of September 1880 in Milan, Italy. Delegates at the 2nd International Congress on Education of the Deaf voted to outlaw the use of sign language in the education of deaf children in favor of using speech and reading lips. The delegations from the U.S. and Great Britain were the only ones to vote against this course of action.

For years, deaf people had been brainwashed to believe that sign language is bad and that it should not be openly used. We were led to believe that we should be ashamed of our disability. I, along with most other deaf children around the world at that time, hid our sign language in public. . I also grew up with no access to TV, movies, and telephones, and limited access to community activities that relied on hearing. My knowledge of the world was restricted to what I read in the newspapers or what I learned from reading letters and the diary that my mother encouraged me to read. Later as a student at Gallaudet College (now University) I had unique opportunities to visit many museums and libraries in Washington, DC. Even then my knowledge about the rich history at Gallaudet University was very limited.

Deaf people growing up then and even now, I think, looked to hearing people for information, thinking that they knew everything simplybecause they could hear.

The D.C. Public Library in Washington, DC changed my life.

I now have self-esteem. I now see that all people who are deaf or have some form of hearing loss, their hearing family members, people with career and/or common interests in deaf culture, auxiliary aids, diversity and services, and those who are also blind or have learning differences, need to learn from each other and work together as one interest group - the deaf community.

In the past, I tended to separate myself from the above-mentioned groups, and I also avoided hearing people who are blind or have learning differences. No more! I love working with them all.

The library also brought me insight into the diversity of populations, including those with ethnic identity. I did not have good knowledge of this until I become an active member of the ALA and other library organizations.

My first job at the D.C. Public Library was a clerical one, but I know it was a very valuable passport to the future for me. It was at that library that I actually first began to appreciate reading the various subjects that appeared in the materials that came across my desk, as I was responsible for recording every new book that came into the library system. From that point, I became more aware of the real world. This was also the place where I learned much about dealing with people who did not know about deaf people.

During the 1970's, when the disability community began to demand rights for its people in relation to education and jobs, I took the opportunity to start graduate school. I will never forget the many questions my library classmates asked me about deaf people. This is something that had never occurred at my workplace. My classmates and I learned from each other in preparation for our profession. My professor encouraged me to write a booklet about deaf people. While working on it, I was surprised to learn many things, including some information with which I did not agree. When I became the first "Librarian for the Deaf Community" - the first such library position at a public library - I took my responsibilities seriously. While searching for facts to help me provide the public with exciting programs and activities, I also learned a lot about deaf history.

When I started my new position as Librarian for the Deaf Community, there was no book, which spoke positively about the deaf community. All that people could find was focused on the problems of hearing loss and deaf people. Actually, our problems are no different from those of others, except in the area of communication. It is the communication barrier that causes problems. If our needs were known, there would be no big problem. I decided to start something that would help with the communication barrier. To make a long story short, I developed an information resource for deaf people and those associated with them. It is called THE RED NOTEBOOK and I encourage you to look into it. It is now also soon to be available online.

I feel fortunate to have associated with caring librarians at the DCPL. Molly Raphael, now the DCPL Director, was actually the first one to push me hard in convincing the DCPL administration to establish a full-time library position to focus on services to the deaf community. My first experience as an advocate! Anyway, three months after I started this position, I attended the ALA annual conference for the first time. While at the ALA conference, the DCPL asked for a meeting with interested ALA members to discuss establishing a unit within the ALA structure to focus on deaf needs. In 1979, I became the first chair of the new section, now called Library Services to the Deaf Forum (we will celebrate our 25th anniversary in June 2004). I am still learning, and I thank the library.

You want to become involved, but are not sure where to start. I would suggest that you start making plans to observe International Week of the Deaf in 2002. You thus have a year to start making plans with your local community and to ask for support from your local businesses, etc.

As we all know, libraries preserve the past and encourage the future.

A nation, a culture, or a community that does not understand its own past will remain mired in its mistakes. Schools and society may make mistakes, but we all can help make it easier for both deaf and hearing people to communicate together and make opportunities for libraries to come alive with the rich world of achievements that benefit everyone.

I appreciate this opportunity to talk to you. When you return home, please think about the 70 million deaf people living in all parts of the world - 80 percent of them live in developing countries where local authorizes are not familiar with their communication needs and where few deaf people have access to education.

Their lives can change if all libraries and librarians are willing to work together. The Friends of Libraries for Deaf Action (FOLDA) invites you to get involved.

Thank you.

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Information Literacy Standards for Higher Education: An International Perspective

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An information literate person is:

"...one who is able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information."

This simple definition was created in 1989 by the American Library Association's Presidential Commission on Information Literacy.[1]

While the term and definition have been debated extensively, the true challenge has not been what or whether, but rather how to create an information literate society. To meet this challenge, an international agenda has emerged through the partnering efforts of many organizations. In the United States, these partners have included the National Forum on Information Literacy, a coalition of more than sixty educational organizations; the American Association for Higher Education, whose 1998 conference theme was "developing students' information literacy"; the Institute for Information Literacy; Regional and Discipline based accreditation groups; Teaching and Learning with Technology group; the American Library Association and many others.

One initiative that has begun to coordinate efforts to create the information literate society has been to develop Information Literacy Standards. Standards have now been established for school and college level students. The American Association of School Libraries and the Association of Educational

Communications and Technology have collaborated on *Information Power: Building Partnerships for learning*, which includes *Information Literacy Standards for Student Learning* for K-12. It focuses on developing, implementing and articulating a vision for the profession through standards and guidelines. For college level students, the Association of College and Research Libraries' Task Force on Information Literacy Competency Standards worked with many groups and individuals to develop the Information Literacy Competency Standards for Higher Education.

The Task force developed the standards with several considerations in mind. Foremost was that information literacy isn't just a library issue, but is an issue for all of higher education and society as well. Therefore the standards had to be developed through a cooperative and collaborative process that included representatives from all stakeholders. From the beginning, librarians on the task force were joined by representatives from the American Association of Higher Education (AAHE), the Middle States Commission on Higher Education (MSACHE) and the Association for Library and Information Science Education (ALISE). This group, in consultation with many others, crafted the language that resulted in a final document. The process was one of drafting, discussion and wordsmithing, and redrafting many times to accommodate the ideas and concepts of the various participants. It was a process of collaboration to integrate the various cultures into a single written standard, incorporating the resources that all parties brought to the table. The result, of course, was not as any one group might have written it independently, but was stronger because it was a product all parties could agree to. No one "wins", but everyone is a winner. The final document represents a **shared vision**.

This document, which is now available at http://www.ala.org/acrl/ilcomstan.html and contains five standards and twenty-two performance indicators. The standards apply to the needs of students in higher education at all levels. They also assist in assessing student progress toward information literacy. They serve as guidelines for faculty, librarians, and others in developing local methods for measuring student learning in the context of an institution's unique mission. In addition to assessing all students' basic information literacy skills, faculty and librarians should also work together to develop assessment instruments and strategies in the context of particular disciplines, as information literacy manifests itself in the specific understanding of the knowledge creation, scholarly activity, and publication processes found in those disciplines.

Librarians in the international community can encourage support of information literacy and the information literacy standards within their professional library associations and within their educational and accreditation associations. To do this, they may wish to partner with faculty colleagues to present papers, panels or poster sessions, conduct workshops, and host discussion forums. They may wish to encourage adoption or endorsement by these associations.

The process of translating the standards into other languages has begun. In the efforts toward creating accurate translations, careful attention is being paid to nuances of language and meaning that were so carefully worked out as the document developed. If anyone in the audience is interested in participating in this initiative, they are welcome to leave their card, or name, address and language with me after the session and I will forward it to Barton Lessin, the Chair of the current Task Force for his consideration.

Some of you may find that an exact translation is a good first step, but not the final one. The best way to advance information literacy in your own country, organization and/or institution may be to recreate the process to arrive at another set of standards that are adapted to and appropriate for your situation. Patricia Iannuzzi, chair of the original task force, states, "We developed the standards with the expectation that they would be customized for the specific environment."[2] The process could mirror the process used by the task force by identifying the stakeholders and bringing them to the table to begin a dialog on information literacy. The "Information Literacy Competency Standards for Higher Education" may be a good place to begin the conversation, but the parties involved may find that the culture, circumstances and purpose require adjustments. This same model process could be the best way to achieve support at the level of a country, an association or an educational institution

Examples of how information literacy initiatives and standards have been applied in the United States at various level include the following: At the state level, Colorado, Wisconsin, and Oregon have adopted standards. In addition, several initiatives have been developed by statewide systems of higher education, including SUNY Information Literacy Initiative (http://www.sunyconnect.suny.edu/ili/final.htm), the California State University System Information Competence Project, Wisconsin (http://facstaff.uww.edu/WAAL/infolit/ilcc.html), and University of Massachusetts (http://www.lib.umassd.edu/INFOLIT/InfoLitComp.html). Individual Colleges and Universities have also implemented standards. Some of these are Earlham College, Kings College, University of Louisville (http://www.louisville.edu/infoliteracy/aboutus.htm), University of Washington (http://depts.washington.edu/itlit/mike_n.html), and Florida International University (http://www.fiu.edu/~library/ili/iliprop1.html).

At the level of the educational institution, librarians and administrators can encourage the inclusion of information literacy concepts and standards into their institution's strategic vision and planning process. This could include the institution's mission or vision statement, the strategic plan, institutional goals and other documents that set the overall tone and direction of the institution. The library's own documents should also include these concepts. Other important policies and documents that relate to undergraduate education, such as general education definitions and requirements, teaching and learning guidelines, etc. are appropriate places for information literacy concepts to appear. "In many cases existing institutional documents contain language that incorporates principles of information literacy without it being labeled as such. It is important for librarians to help expose those connections and build upon them." My favorite example of this Penn State University is that one of the goals for the strategic vision is to "develop world-class teachers and learners"[3] I believe that world-class learners can only be achieved through information literacy, and am pleased to have such language to use when discussing the importance of information literacy with students and faculty on campus.

Once standards have been adopted, Iannuzzi suggests the following roles for librarians in building "the information literate student":

- Work with faculty to develop curriculum, syllabi, and assignments that focus on the research process and the development of information literacy
- Join with faculty to explore and implement performance-based assessment methods
- Identify campus partners on faculty development and help transform teaching and learning through information literacy
- Collaborate with faculty to help them define information literacy for their discipline
- Identify and focus on library responsibilities toward information literacy and develop library instruction programs accordingly.

- Ensure that librarians teach the research process and its concepts, and do more than introduce electronic tools and technology to their patrons.

- Provide continuing education for librarians about teaching techniques, outcomes based learning, and assessment.[4]

To assist librarians in their efforts to prepare themselves for these roles, the Institute for Information Literacy has developed an Immersion program to help new librarians learn to teach, and to assist experienced teachers to understand the issues surrounding the collaborative processes needed in the implementation of standards and programs within the institution. The American Library Association, and the Association of College and Research Libraries have also been conducting workshops on advocacy for information literacy at their conferences.

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Information literacy and academic libraries: the SCONUL approach (UK/Ireland)

Toby Bainton
Standing Conference of National and University Libraries
United Kingom

Abstract:

Discussions of 'skills' in higher education often conflate 'information technology' skills and 'information skills'. The second term is broader and more directly related to the aims and processes of higher education as a 'knowledge creation' activity. A clear distinction should be made between information skills and information technology skills. Both information skills and information technology skills are essential parts of a wider concept of information literacy. A broadly-based definition of information skills in higher education reflects twin dimensions of the 'competent student' and the 'information literate' person. For the development of the information literate person SCONUL proposes seven sets of skills developing from a basic competence in library and IT skills.

Information skills in higher education: a SCONUL Position Paper

Executive summary

1 Discussions of 'skills' in higher education have hitherto conflated 'information technology' skills and 'information skills'. The latter term is much broader and more directly related to the aims and processes of higher education as a 'knowledge creation' activity. A clear distinction is made between information skills and information technology skills.

2 Both information skills and information technology skills are seen as essential parts of a wider concept of information literacy.

3 A broadly based definition of information skills in higher education reflects twin dimensions of the 'competent student' and the 'information literate' person.

4 For the development of the information literate person a model is proposed based on seven sets of skills developing from a basic competence in library and IT skills. The model attempts to address the key question of different levels of higher education work.

5 There is evidence of recent growth of activity in UK institutions in the area of information skills development.

6 It is proposed that the development of the idea of 'information literacy' requires a collaborative and integrated approach to curriculum design and delivery based on close co-operation between academic, library and staff development colleagues.

7 It is recommended that institutions consider more explicitly, as part of the development of learning and teaching strategies, the size and scope of their own approach to information handling skills. Good practice from institutions at home and abroad should be more widely studied.

8 It is recommended that higher education in the UK should be more proactive in contributing to the debate about the learning implications of an 'information society'.

Background and genesis of this paper

1 In December 1998 a Task Force was convened by SCONUL's Executive Board to prepare a statement on the topic of information skills for higher education students. The purpose of such a statement was to stimulate debate about the place of information skills within the context of current activity surrounding 'key skills', 'graduate-ness', and lifelong learning.

2 We are all experienced professionals with many years of work in higher education in a diverse range of institutions. A wide interpretation of the topic was devised to allow the Task Force to explore the different interpretations and issues. It became clear in the process that the United Kingdom has less clearly developed thinking in this area than many other countries which have been addressing the implications of the 'Information Society' more fundamentally.

3 We considered the following questions:

- Why are information skills important?
- How can information skills be defined?
- What is the size and scope of current activity in UK higher education with regard to information skills?
- Are there principles of good practice in this area, within UK higher education, and from other countries?

The structure of this paper broadly follows the four topics identified above, but initially we felt it important to consider the issue of the relationship between *information technology* skills and *information handling* skills. Much of the published discussion about skills work appeared to conflate the two, and this was a starting point for our work.

Information skills or information technology skills?

4 A recent paper by Sheila Corrall, Librarian of the University of Reading (1998), was a basis for our early discussions. This paper had highlighted the lack of consideration given to information skills in many of the recent publications and discussions concerning the 'key skills' area. The report of the National Committee of Enquiry into Higher Education (the Dearing Report, 1998), had emphasised the importance of skills which are 'key to the future success of graduates whatever they intend to do in later life' and had identified a list of four – communication skills, numeracy, the use of information technology, and learning how to learn. Corrall also reviews other such lists, which whilst sometimes expanding the *number* of skills, largely omit any explicit consideration of information skills.

5 This is in contrast to work in other educational sectors. For example, the work of BECTA has gone a long way to establishing information skills as a recognised aspect of the national curriculum for primary and secondary schools (see BECTA website, listed under 'References' at the end of this paper).

6 Corrall draws distinctions between IT skills and 'information handling skills'.
IT skills include

- Basic skills (use of keyboard, mouse, printer, file/disk management)
- Standard software (word processing, spreadsheets, databases, etc.)
- Network applications (electronic mail, Internet, web browsers).

Information *handling*, defined by Corrall, includes information sources, evaluation criteria, navigation methods, manipulation techniques, and presentation issues.

7 This kind of distinction is supported by others, who also challenge the tendency to equate computers with information, and hence to mistake computer literacy for information literacy. 'This is a dangerous myth, for it assumes that information is only that which is storable and manipulable in a computer' (Taylor, 1986).

8 This is not to say that *information technologies* are not crucial elements within modern day information handling. Information technologies enable us to access information resources. Information systems organise information resources to make them readily accessible. People need to understand how these systems are organised and how they can be accessed – this is a generalist requirement rather than limited to a cadre of specialists.

Why are information skills important?

9 The advent of the internet along with various other electronic and digital resources has highlighted the issues. Some undergraduates are using the internet as their first port of call beyond the reading list. They need to address questions relating to the provenance, accuracy and reliability of the material, which are largely unnecessary in established areas of academic publishing. The information in books, journals and other printed forms, has been

subject to a variety of quality assurance processes - reputable publishers, authors with academic credentials, texts recommended by tutors, careful library spending to ensure a match of material to need. With the internet sources, none of the quality assurance mechanisms can be assumed. The onus is on the user to apply a critical faculty.

10 Information technology has made information superficially much easier to access and use. By reducing all information to a standard format (increasingly the web page) it masks the differences in the way in which information is generated, and differences in the *kind* of information it is supplying.

11 The internet brings new ethical dimensions too, with difficult questions of ownership of information and copyright, and the potential for plagiarism.

12 The study by Kathryn Ray and Joan Day on 'Student attitudes towards electronic resources' (1998) found that that it is 'apparent that large numbers of students….are leaving university without the necessary transferable skills to cope in an information based society'. BECTA have stated the need 'to make students critical consumers of information' (see References). In the USA an influential report by the American Library Association (Report of the Presidential Committee, 1989) emphasised 'the need for all people to become information literate, which means that they are not only able to recognise when information is needed, but also able to identify, locate, evaluate and use effectively information needed for the particular decision or issue at hand' (ALA web site). In the USA a National Forum for Information Literacy has been established with representation from a wide range of educational organisations.

13 Taking the idea further, some commentators see what is called 'information literacy' being something which enables individuals not only to use information and information technology effectively and adapt to their constant changes but also to think critically about the entire information enterprise and information society. (Shapiro & Hughes, 1996). The paper draws a parallel between the modern 'information literate' person and the long-held idea of the 'educated' person. Another writer (Doherty, 1999), describing information as an 'essential commodity for survival', states 'It is our intention to teach our users to become independent and informed information consumers on their way to becoming lifelong learners'.

What are 'information skills'?

14 Within higher education there are two strands to this question:
(a) the strand relating to 'study skills' which students will need to call upon in the process of undertaking study at a higher education level - a 'tool' for the 'job' of being a learner
(b) the strand which is about students being prepared to take their part fully in whatever subsequent occupation/employment/activity they may choose upon leaving higher education.

15 Strand (a) includes such skills as being able to use an institutional library and its resources to further one's studies, being able to perform 'literature searches' to whatever depth and complexity is required for a particular curriculum/discipline area, and being able to demonstrate this to the satisfaction of tutors and assessors in whatever form necessary by means of citations and references to reading and information gathered. This approach supports the idea of a 'competent student' – one who is able to function effectively as part of the academic community.

16 In strand (b) above, one might more broadly define 'information skills' as including, in addition to those already listed, attributes of awareness and understanding of the way in which information is produced in the modern world, critical appraisal of the content and validity of the information (linking with elements of critical thinking more generally), some practical ideas of how information in the real world is acquired, managed, disseminated and exploited, particularly with knowledge of how appropriate professional groups use information in the workplace, in business, and in the world of culture and the arts. This 'information' may be textual and published information but will also include other forms of information communication, both formal and informal, designed and fortuitous, interpersonal and via information technologies in a much more encompassing way. For this level of information skills, the adoption of the term 'information literacy' is appropriate.

17 We carefully considered a number of previously published definitions of information skills. The seven 'headline' areas below represent a synthesis of those which we felt best represented our own views. Where appropriate the headline skill is followed by examples of the kinds of specific activity or competence which illustrate the application of the skill.

The seven headline skills

1 The ability to recognise a need for information

2 The ability to distinguish ways in which the information 'gap' may be addressed

- knowledge of appropriate kinds of resources, both print and non-print
- selection of resources with 'best fit' for task at hand
- the ability to understand the issues affecting accessibility of sources

3 The ability to construct strategies for locating information

- to articulate information need to match against resources
- to develop a systematic method appropriate for the need
- to understand the principles of construction and generation of databases

4 The ability to locate and access information

- to develop appropriate searching techniques (e.g. use of Boolean)
- to use communication and information technologies, including terms international academic networks
- to use appropriate indexing and abstracting services, citation indexes and databases
- to use current awareness methods to keep up to date

5 The ability to compare and evaluate information obtained from different sources

- awareness of bias and authority issues
- awareness of the peer review process of scholarly publishing
- appropriate extraction of information matching the information need

6 The ability to organise, apply and communicate information to others in ways appropriate to the situation

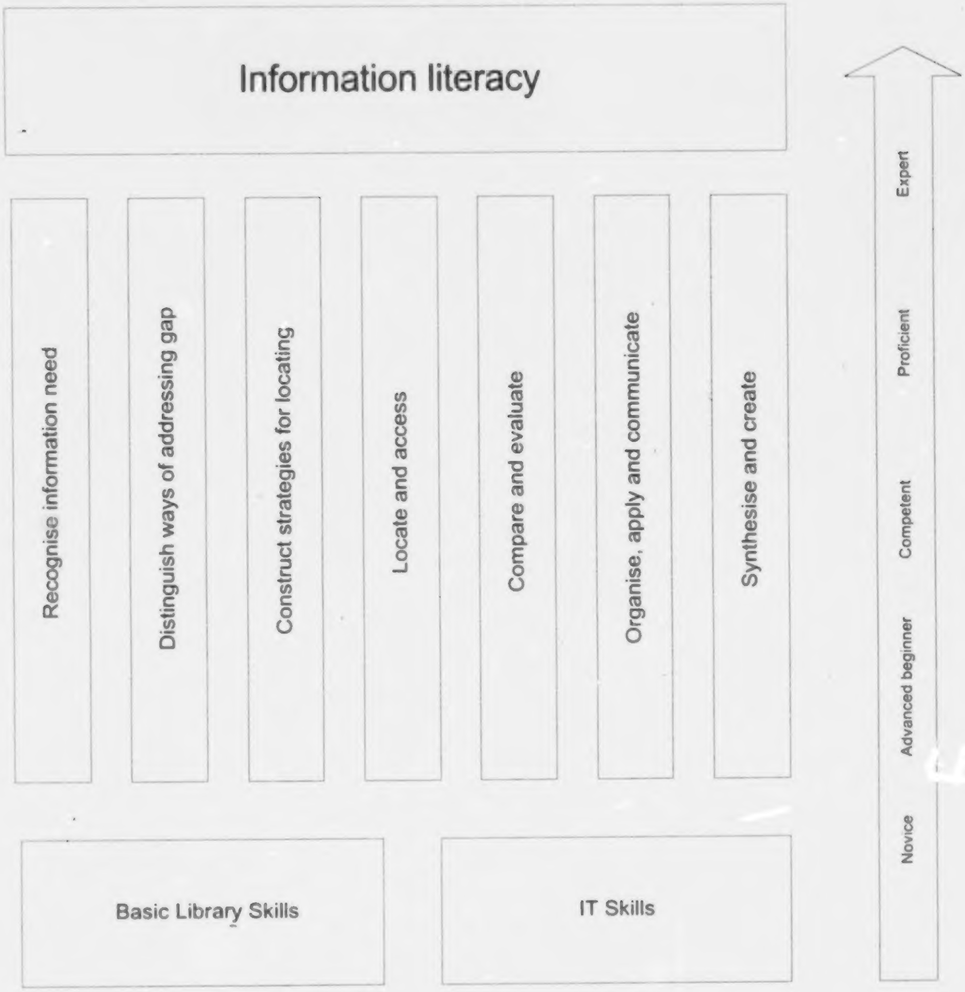
- to cite bibliographic references in project reports and theses
- to construct a personal bibliographic system

- to apply information to the problem at hand
- to communicate effectively using appropriate medium
- to understand issues of copyright and plagiarism

7 The ability to synthesise and build upon existing information, contributing to the creation of new knowledge

18 The information skills model (see diagram) attempts to show diagrammatically the relationships between the 'competent information user' at the base level (strand (a) above), and the much more advanced idea of information literacy. The 'pillars' show an iterative process whereby information users progress through competency to expertise by practising the skills. Only those at the higher end will be practising the seventh skill level.

Information skills model


Information literacy
Recognise information need
Distinguish ways of addressing gap
Construct strategies for locating
Locate and access
Compare and evaluate
Organise, apply and communicate
Synthesise and create
Basic Library Skills
IT Skills
Novice
Advanced beginner
Competent
Proficient
Expert

19 At the base of the model are the twin fundamental building blocks of basic library skills and basic IT skills. The former is very much apparent in the user education programmes of academic libraries, the latter can be seen in developments such as the European Computer Driving Licence. Between the base and the higher level concept of 'information literacy' appear the seven headline skills and attributes, the iterative practice of which leads from being a competent user to the expert level of reflection and critical awareness of information as an intellectual resource. The progression from novice to expert is indicated by an arrow. First year undergraduates will largely be at the bottom of the arrow, perhaps only practising the first four skills, whilst postgraduate and research students will aim to be towards the expert end, and will be aspiring to the seventh.

20 We felt that, within higher education, information literacy should include the notion of an individual who is able to contribute to the synthesis of existing information, to further develop ideas building on that synthesis, and, ultimately, create new knowledge in a particular subject discipline.

What is the size and scope of work currently going on in higher education institutions?

21 'There are few academic library services that do not now regard the teaching of information skills as an important part of their mission' (Biddiscombe, 1999). This is evident from recent trends of activity in this area of work, identified from data supplied by the Library and Information Statistics Unit at Loughborough University. The average number of hours spent by library staff providing orientation and post-orientation for students in SCONUL institutions has increased over the last six years from 13 hours to 22 (per 100 fte students). There are variations within this, for example, in 'new universities' the figures are 22 and 28 respectively, whilst for CURL (Consortium of Research Libraries) institutions the figures are 6 and 17. Though the amount of 'teaching' varies from institution to institution the trend is very clear. The number of users receiving orientation or post-orientation sessions is increasing overall from 36% to 46%, while appearing to be constant in the 'new' universities at 60%.

22 Institutions are also engaged in information skills work as part of training programmes for teaching staff.

23 We sought views on the reasons for the increases by means of an informal e-mail-based survey, and a summary of results is given in Appendix 1.

24 Whilst the size of activity is impressive in itself, and is growing, its scope falls some way short of a coherent approach to the development of 'information literate' people. Much is left to the initiative and actions of small groups of interested staff (both librarians and subject teachers), working in pockets and with no overall framework.

25 Those library and information staff involved in training are principally 'subject librarians' or equivalent. Some universities now see this as a major part of the work of a subject librarian. Some institutions have established within their structures 'information services' elements with a clear remit for user support and training.

26 The greater part of those replying to the informal survey perceived no current need for staff involved in this area of work to engage in formal training themselves for its delivery. In a

significant number of services, however, there is a clear intent that the library staff should 'have teaching and learning know-how'. The number of staff who are already teacher-trained varies from institution to institution. Several of the replies mentioned the Edulib eLib programme (part of the Electronic Libraries programme funded by the UK higher education funding bodies' Joint Information Systems Committee) as being useful in placing their teaching work in a context of theory and accepted educational good practice.

27 Several survey respondents perceived that the advent of the Institute for Learning and Teaching will have an impact on library and information staff as well as subject teachers. 'Until recently most librarians had seen their training role as a minor part of their professional activities and consequently felt little need to intellectualise the process' writes Richard Biddiscombe (1999) and goes on to describe the likely change in relationship which may come when teaching staff find themselves being taught by librarian colleagues as part of formal teaching qualification programmes in higher education. 'Meeting the learning needs of the probationary lecturers enrolled on the course will not only be important, it will change the relationship of information professionals to academic staff in new and subtle ways'. One respondent to the survey stressed that this approach to supporting students (i.e. through the subject tutors themselves being better equipped to assist students with the development of such skills) as both more effective and more feasible in terms of staff/student ratios.

Good practice in the UK and abroad

28 Where there is diversity of practice and context it can be difficult to present a clear picture of good practice. Some key elements have emerged. Both the literature and practitioners support the absolute necessity of information skills work being integrated into the subject curriculum.

29 It is noteworthy in this respect that the subject benchmarking work carried out recently for the Quality Assurance Agency for Higher Education includes recognition of the importance of information handling elements which are in accord with the subject disciplines concerned. (QAA Draft Statement Benchmark standards for Chemistry, History and Law, 1999)

30 This point is also apparent from developments in other countries. In the USA and in Australia there are examples of initiatives in particular universities towards a strategic approach to information literacy development. We were impressed by the work of Griffiths University, Australia, in developing an 'Information Literacy Blueprint'. This stresses the necessarily collaborative nature of such an approach. 'Information literacy education…is the shared responsibility of all educators and information providers' (Griffiths 'Blueprint'). The document goes on to state 'Effective information literacy education depends upon co-operation between information specialists and discipline experts to achieve curriculum innovations which foster information literacy'.

31 Other principles which might be supported include

- That information skills programmes should aim to cater appropriately for all kinds of learner at all the various levels of learning
- Programmes should have clear aims and be based on sound pedagogic foundations
- Programmes should have quality and feedback mechanisms built in

- Programmes should attempt to measure initial and exit competence, and can thus demonstrate impact
- Programmes should be managed effectively and delivered cost-effectively
- Programmes should make valid use of new technology and other innovations

In many of these principles there is no distinction between information skills programmes and any other learning provision.

32 Integration of information skills across the curriculum requires university and course leaders, lecturers, staff developers and library and information staff to work collaboratively. The Chief Executive of the Universities and Colleges Staff Development Association (Pennington) in welcoming the work of the Task Force, endorsed this approach. The establishment of the Institute for Learning and Teaching, with its aim of providing an inclusive professional body for all who teach and support learning, provides an ideal context in which integrative work such as is required for information literacy can be both enabled and recognised.

33 Libraries are involved in a number of ways – in terms of resourcing the relevant materials, facilitating the use of those materials, as well as in providing a collaborative focus for partnerships. The effectiveness of the library should be promoted and evaluated in new ways, for example in terms of impact on educational and research outcomes, in recognition of this new dimension.

Some questions for institutions to consider further in their own context

- To what extent are current or developing institutional strategies for learning and teaching seen to incorporate the underlying principles of 'information literacy' among their students and staff?
- To what extent is the work currently being undertaken within the institution with regard to information skills deemed to be meeting, or be capable of meeting, the requirement for the development of the information literate student at the various levels identified?
- Are enabling mechanisms in place to promote co-ordination and collaboration between those who have an interest in developing these higher level skills in students and staff?
- At a course or programme level, do existing mechanisms for review of curriculum design facilitate the incorporation of ideas about 'information literacy' development?
- Is the higher education community in the UK contributing as actively as it might to the debate about the implications of the need within an 'Information Society' for informed and information literate constituencies?

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Customer or refined student?

Reflections on the "Customer " Metaphor in the Academic Environment and the new Pedagogical Challenge to the Libraries and Librarians

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This paper consists of parts from two essays:
Keyword: Information Literacy. The Educational Challenge that Lifelong Learning poses for University Libraries
and
Customer or refined student? A Report - or rather Reflections - concerning Social-psychological Analysis of the "Customer " Metaphor

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"Do not let your studies impede your education" (Unknown professor to his students)

The Concept of the Customer

The Swedish word *kund* (customer) is related to the German word *Kunde* and means, originally, known (*känd*). This meaning of the word is precisely what one deals with within the so called relationship-based marketing. To get to know as much as possible about the customer, to know him or her so well that one can establish a relationship that will satisfy the needs of both parties. The customer becomes satisfied and loyal, the company´s employees feel a sense of satisfaction and such an arrangement provides a steady source of revenue for the company. The wheels of a well functioning market economy are in motion.
A market where, according to some, consumption is the same as an improved quality of life. In a market economy the production and exchange of goods are based upon voluntary agreements between independent actors: producers and consumers. The term market usually refers to a group of potential customers who have specific wishes regarding the product and who have the resources to buy it.

Can one apply this view - of producers and consumers being two equal parties – when looking at the relationship between a university and its students? Is the independent, modern university, controlled by the state-owned Higher Education Administration, a producer of services that attracts students - the customers - in a market place among other institutions of education? A market where supply and demand, advertisements and relationships, are just as relevant as in the commercial market.

To a certain degree one can apply the "customer" metaphor to the student. The university offers, not only short courses, but a very complex product: namely the three-four year degree course. But, as they say, the student is not purchasing knowledge he is buying a future. With time and borrowed money the customer - who is becoming increasingly harder to please - buys what the university has to offer. What happens to "education and knowledge" under such circumstances? If one expands this metaphor to the concept of satisfied customer the question arises whether it is desirable to only have satisfied students. Wasn't the ideal, recently, to have critical thinking and questioning students?

Refinement - for what purpose?

The Swedish researcher Bertil Rolf writes in the book *Kvalitet och kunskapsprocess i högre utbildning*, Knowledge and Quality in Higher Education (1993) about education being a process of refinement. If you add a marketing perspective to higher education and give people what they request, then you satisfy the course participant on a level that they all have in common, and sometimes even below that level. But education can, according to him, also have as a goal to refine people. "Its purpose is to raise the demands that people have put on themselves and to point them in the right direction to reach those higher goals. In an existentialist perspective, education can partially lead to a refinement of people - or more precisely, get them to refine themselves."

What Rolf means is that higher education should sometimes trouble the students and not only make life easy for them. Kafka expresses something similar but in another way:" If the book we are reading does not wake us up as though we had been hit in the head with a bat why bother to read at all? Books that makes us happy are books, we in theory, can write ourselves. What we need are books that affects us deeply."
It is not long ago since the point of higher education was to mould the students into independent and critical people instead of satisfied people who get exactly what they want and not an inchmore. According to Rolf, independence, insight about oneself, reflection and an ability to choose are the ideals one should aspire to within the field of education. He sees no meaning in applying, as he puts it, illusions about the customers experiences and needs at the university. One should instead strive to raise the quality and strengthen the students ability to judge and choose this quality. But only those who have seriously taken

part in a professional process of seeking after and providing such knowledge can establish the criteria needed to judge its quality. He compares the satisfied-customer perspective with a feverish child in need of penicillin but who rather wants ice-cream. For us who work with knowledge production to get modern "instrumental" students to choose and understand that they really need the higher quality of penicillin more than they need tasty ice-cream is indeed a challenge. A way to break the tendencies to an irresponsible consumer attitude to knowledge is by applying the new pedagogical approach of making the students participate, be responsible for their own learning. A sharp contrast to this is the idea that the student is a consumer, a passive consumer without any personal responsibilities in an expanding "mass-university".

McUniversity or a Different University

George Ritzer, Professor of Sociology at the University of Maryland has, in his books *The McDonaldization of Society* (1996) and *The McDonaldization Thesis* (1998), described and deliberately exaggerated the concept of fast-food universities. Something which will become a reality if we only apply market trends to higher education. We are in the postmodern consumer society, on our way to creating a university that will be a pastiche, a blend of fast-food restaurants, Disneyland, MTV, and Las Vegas. He describes a higher education where cost efficiency and quantification has taken over at the cost of course-quality and meaningful contact between students and professors. The pressures of being efficient results in a computer-designed and graded multiple choice exams. Hoards of students will be processed through the new mass-universities with an emphasis on degree rather than on what they have actually learned. Goal-orientated students choose universities according to ranking while the employer looks superficially at all the credits - the number credits accumulated equals the level of qualification. The professors are forced to publish more but without having the time to fully explore their ideas. Quantity, is completely analogous to the chain of fast-food restaurants and their inflated, giant hamburgers. The student, in turn, grades their teachers performance by using standardized questionnaires that provide limited space for presenting any qualified reasoning that lies behind their grading. The teachers who find it easy to perform, who are entertaining and not too demanding receive a high grade compared to the more serious professor with profound ideas and who's demands on student participation and responsibility are high.

Even the design and organization of higher education will resemble large shopping malls or fast-food restaurants. Easy accessibility, open around the clock, and service minded staff will be the norm. Students and their parents are to a great extent customers and education is the product they need. "All they want of higher education is simple procedures, good service, quality courses and low costs." (*Levine, A, Student Expectations of College, 1993 in Rizer p 153*)

Ritzer establishes a standpoint by deliberately exaggerating his description of the "mass-university" He wants us to make a choice. And if that choice, is to go in the direction of "mass-universities," then we must also be aware of how far we wish to go in that direction.

Malmö University was established on the 1st of July 1998. It is a typical representative of the new incentive to establish colleges across the country in Sweden. The entire process has gone very fast and in the beginning we who works there were very proud of this and as a kind of reward to ourselves we established new courses and admitted many more students. Behind this effort to create a different kind of institution lies many valuable ideas and goals. For example the broad base for recruiting students, a new pedagogical approach, collaborating
with other aspects of the surrounding community, being multi-disciplinary ....the efforts to grow as a university should not result in an abandonment of these goals.

Who are the students and what do they want?

It is claimed today, and is shown in many surveys, most recently at Växjö University, that students, in a whole new way, are aware of costs and of what it means to be efficient. Soon we will see them march out of the classes demanding money back if the courses do not provide what they initially promised, says, among others, Ritzer. To the same extent as we got them to march in. Universities and colleges are increasingly trying to outshine each other in their attempts to attract these "future-consumers" by way of catalogs, adverts, and fairs - all done in the spirit of a "day out at an American shopping mall". These students are more globally aware than ever before. Higher education is already an international commodity. In the U.S. foreign students contributed with 13 billion dollars during the academic year 98-99.

In Australia the export of education is essential for the country's trade-balance. And by the year 2005 Great Britain hopes to have 25% of the "education market". (Source: Dagens Nyheter, The Swedish daily newspaper´s educational supplement)

Currently, in Sweden, there is a great deal of attention being paid to a recent study at Lund University regarding the biased recruiting in higher education. This study shows that the chances of going to college is six times higher if your parents have gone to a university. But that reason is not always a strong enough incentive for going to college. Today, when the number of jobs available increase and many young people see how easy it is to get access to "IT-millions" education is no longer attractive. "I don't have time to waste 3-4 years getting an education! By the time I'm finished the opportunities will have disappeared" says 19 year old Simon, already wealthy from building homepages that he and his classmates sell expensively during their last year of high school.

The question - who is a student at Malmö University? - is easily answered. Of the approximately 13.000 students many are citizens of Malmö, including many immigrants, who wish to get a higher education and still be in a "home environment". In many cases it is people who have chosen to study half-time and work at the same time. At an individual level the differences between the students are greater and their career direction might not be so obvious. Three of our students will exemplify this. Remy is 30 years old and originally from the Ivory Coast but was brought up in Paris, he is studying systems-technology to become a graduate engineer specializing in telecommunication Why did he choose Malmö University? Simply because he wasn't admitted to the more prestigiuous Lund University but aims to continue his education there. He is now finished with his degree work that he has done for the Swedish company Ericsson. His subject area is very specialized but since he has gone to a French technical high school and to Faculté de Science at Paris III-University he has already acquired an educational background quite different from that of Swedish students.
We discuss French literature and despite him having chosen a technical direction in his studies he says he misses learning more about human communication and languages.

Åsa is 23 and Alma is 19. Both represent a completely different type of student. They are studying "People, Environment and Society" within the Nature and Resource Programme and do not yet know in what way they will use the knowledge. Both have studied the social science program at high school and have a muddled view of the kind of job they can expect to get, maybe environmental engineer or environmental consultant. This is their choice: the broad based program. They do not want to become too specialized, too soon. Even if at times it might feel a bit scary, it is also rather comforting, says Åsa. We are agreed that their attitude is clearly linked to their interest in society and to their subject choice.

The pedagogical challenge for us as a university library is to meet the needs of as many types of students as possible.

What is the role of the library and librarians? Are they prepared for the educational challenge? Is it possible for them to play a leading part when it comes to initiating teamwork and introducing quality programmes in information literacy at the universities? What aspects are new and what constants, i.e. unchanged conditions, can one find? An essential characteristic of librarians is their ability and desire to change the role they play when it comes to the challenges of lifelong learning.

Problem:
To become information literate, which is the overall goal for the participants in our library course programme, one must view information literacy as a process, and not something with a clearly-defined beginning and end. A process can seldom be measured. Can one describe a process? Is the encounter describable? Does this process do more than just aid one's natural skills or is it "only" a financial necessity resulting from the massification of higher education? If so, what happens to quality? To meet the needs of all those involved in lifelong learning, Sweden has decided to merge public and university libraries. There has been an increase in the number of students taking part in distance-education programmes, and as a result of that public libraries are facing new challenges. How will they supply sources of information for those students?

Problem-based learning or, to use a more comprehensive term, active learning as a method of education is a prerequisite for libraries wishing to accommodate the needs of students who are independent nformation searches. "The changes, during the 1990s, in methods of education, and the development of a more student involved form of learning, have led to increased demands for broader and more varied sources of information, including appropriate library functions, at all levels of education. One can observe that students are doing independent information searches in connection with their class assignments, that the range of study aids has become more varied, and that the use of libraries for the purpose of teaching is increasing," Louise Limberg has pointed out in her dissertation (Limberg 1998, p.17). The old system of handing out lists of required reading for each course is being replaced by a method of education where the students take responsibility for their own learning. What type of help does such a student need?

A special project at Malmö University

Since we have a broad base for recruiting students we deliberately try to attract students from non-academic backgrounds. The library carried out a project that examined if there was a need for a special pedagogical approach to our courses in information searching. We have a responsibility to ensure that these groups are not excluded from the IT-community.

This project, carried out, during the academic year 1998-99 consisted of two parts. One theoretical part with lectures in methodology and special "mature student" pedagogics for staff and tutors as well as a practical course in information searching together with students from IMER, International Migration and Ethnic Relations, where many foreign students study and CKU, Center for Competence Development where many mature students with considerable work experience study and with Bio-medical analysts, who are often middle aged, women and immigrants. The course aspect was led by several tutors and proceeded slowly and all the tests where oral. How did we market this course? It was not easy since the students do not see themselves as belonging to a group "unfamiliar" with searching for information. We decided to target both teachers and students and called the course "Intensive course in information searching. Special offer to the students at Malmö University" hopefully appealing to their will to become more competent, than others, in this field.

One of the great successes with this project could be defined as relationship marketing. The continued contact with the students resulted in a different kind of quality. A library, and especially a university library, can seem rather daunting if you come from a non-academic background. But these students felt comfortable with us, the library and computers. They kept coming back as old friends. We observed them searching independently and only asking a few qualified questions at the information desk. We had the feeling that a whole new world had opened up before them. This sounds almost biblical but it was a very satisfying experience. We probably achieved both a refinement as well as a staff-customer satisfaction. This use to be called the win-win concept.

Programme for Information Literacy and the Committee for Quality Control

"The fundamental university education shall, beyond knowledge and skills, provide the students with an ability to pass judgment independently and critically, be able to independently solve problems as well as be able to follow the development of knowledge within the field of education concerned. The education shall also develop the students ability to exchange information on a scientific level." (SFS *The Swedish Code of Statutes* 1992:1434)

If you look at the relationship, between the university library and the students, as a salesperson-customer relationship, then the most important contribution that the library can provide is our courses, both in printed and digital form, in information searching. An information competent person can be described as a person with an ability to search and critically examine and creatively use the information. The purpose with our courses as mentioned above is to make the student aware of and take responsibility for their own learning, gain increased ability to think critically and independently, improved ability to solve problems and give them the tools needed for life-long learning.

The committee for quality control at the university consists of area prefects, pro-rector, head of administration, union representatives, and student union representatives. The Library and IT has, before this committee, presented the programme for information literacy. A programme aimed at the information literate student and conducted on different levels, from a pre-degree level to a doctoral level. This programme is now part of an overlapping plan of action regarding quality work at the university. The Higher Education Administration, who recently gave Malmö University the right to award Bachelor Degrees, mentions especially the ambitious IT support and the courses in searching, evaluating and handling information integrated into the subject areas, as an important quality factor when awarding us with this right.

Whom do we exist for?

The only simple and indisputable question every organization must ask is: For whom do we exist? The concept of customer can be questioned, however one cannot question that the organization has come about for the purpose of providing a service to a customer or client, user or visitor. A university exists, to some extent, as something politicians can speak about in terms of regional importance, national importance or as a place where teachers can develop their methods, researches test their theories. However, the only important group to attract are the students.

The library at Malmö University exists for students like Remy, an immigrant from the Ivory Coast and France, and for students like Åsa and Alma. Our purpose is to offer them services they need for their studies, create a good relationship through out the entire duration of their studies, and contribute to their information literacy as well as a will to keep searching. We can only achieve this if what we offer is of a high quality. And if we shall talk about refinement then we must first look at what information literacy really means. Competence is an overused word - from social competence to computer competence - that really doesn't say very much. Information literacy is a term that deliberately connects, not only to competence, but also to a deeper understanding of what one is reading. The Australian researcher Christine Bruce has written in her book "*The Seven Faces of Information Literacy*" (1997) about the seven phases a student must pass through to go from Information Technology to conquering Knowledge

Construction and Knowledge Extension and, finally, reaching Wisdom. If what she writes is accurate: that students can use the information literacy we offer as an asset and turn it into wisdom that can improve the world -THEN - we can really talk about refinement. An example of such a course is now taking place at Malmö University called Communication for Development within the area of Arts and Communication. The course started last autumn and has as a purpose to deepen the insight into the interaction between social development and information, communication and media, through both theoretical studies and through a specific project assignment in a developing country. The library has an important role in this distance course and I have in fact used the IFLA-list to help the students to get in contact with librarians and researchers in several developing countries during the last academic year.

Concluding discussion

Is everything new, then, or are there some constants in this context? Such a constant could be *the desire to search, the human need to seek knowledge, will, desire to learn*, as one of the interviewed librarians put it.

For libraries and librarians, information technology is a pipe dream, but in a very special way. To gather and structure information in printed form has always been their specialty. This is now done in a new way, while at the same time as everything has become searchable much faster and in a much simpler way. At the same time, it has become more difficult to quickly and easily evaluate the information one finds. This is a need shared by everyone in the new information society. We must, in some way, learn this together, and no one has all the answers. But the librarians have acquired a new role and are in demand as never before, both as information architects, disseminators and presumptive educators in the field.

In the *Resolution om bibliotekens roll i det moderna samhälle,* Resolution on the Role of the Libraries in the Modern Society (1998), the European Parliament describes the role of the librarian as follows: "Professional librarians have outstanding qualifications when it come to administrating and handling information. This makes it possible for all citizens to access and be able to use the information, something that is becoming increasingly important in the information society information technology increases in importance" (my underlining).

Can librarians meet this challenge? I believe that recent library-school graduates can meet this challenge even if I it is largely a question of personality. Despite that, we can, in our employment interviews, see a clear difference between young and old librarians, between those who studied years ago and those who today are admitted through tests and interviews. Right from the start there is an obvious authority and professionalism, which only grows larger. They do not even understand some of our questions, for example the one that asks if they have chosen the library profession instead of a teaching career because they expect it to be smooth sailing. Instead of what? To be a librarian today is to be a teacher. Librarians are aware of this, and also that companies are screaming for information architects. What some fear today is that not very many people want to become children's librarians and that soon the public libraries will have a problem, when a whole generation of librarians goes into retirement..

And the student, how is he or she challenged? How does the situation look for him or her in these various cultures that exist at the different seats of learning? Is the student as "new" as we keep saying? Is it any different than it was in the past or are there any great differences between studying at old or newer institutions of higher learning? One of the librarians at the time-honored university library in Lund, a library that now has the task of preserving a cultural heritage rather than being a spearhead, says to me that students are as they have always been: they do what is expected of them, follow the rules and regulations, and have the same need for kindness, respect and support. Still, a big difference, especially at this library, is its openness and its goal of creating a "library for the students", and not just for researchers, as was previously the case. So is there a new kind of student with new needs? One of the really new conditions today is that the Swedish seats of learning are increasingly adopting the so-called active learning method. This means that the students take an active part in their information gathering, and for this they need the libraries and librarians more than ever. That is why the interaction between the tutor/librarian and the searching student is important all the way up to the doctoral level. Active learning and information technology bring students and librarians together in a way that was previously reserved for pupils and teachers, and not only in connection with course work but also in a practical way in every search situation in the library.

The librarian is there for the student either he or she is a customer or being refined to reach information wisdom. The student is not there for the librarian. The student is at the university in order to shape his or her future by himself, and to do this he or she has to utilize every available resources, human as well as material. And this is really nothing new either, even if the roles and prerequisites have partly changed.

In the future we will see an increasing emphasis put on information literacy at public libraries, in the field of adult education, and in connection with company training courses. Team-building and cooperation, both on and off campus, are some of the most important questions one sees when one looks ahead, as well as the need to introduce assessments before, during, following and long after the complicated process of information literacy.

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Difficulties and new Approaches in User Education in Germany

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Abstract:

Already in the seventies of the last century German libraries discovered user education as a new area of responsibilities. First promising activities at the end of the seventies were not continued because of a the lack of staff and organizational conditions.
Since the beginning of the nineties especially greater academic libraries renewed activities in that field. Because of the difficulties users had in the use of CD-ROM databases and OPACs they offered courses in the handling of these new electronic information systems. During the last years pedagogical problems arose because of the amount and the complexity of knowledge and skills which have to be taught in the single lessons. These difficulties have lead to new approaches in user education by considering the concepts information literacy, curriculum theory and student centered learning methods.

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1. Introduction

The German libraries are today in a process of fundamental change initiated by the electronic information and communication technologies. Many of them are worried by this development considering it as a fundamental threat to the future of libraries. They are impressed by old conceptions of libraries emphasizing the importance of the stock of books. They do not recognize the new promising perspectives for libraries offered by this change. Libraries can become information centers of fundamental importance in the modern information society. They can take on new important responsibilities in the formation of the information society.

One of the new responsibilities will be the extension of user education and the development of libraries as learning centers. By this libraries can become institutions of fundamental importance in the process of building up information and media competence in society. They can help to compensate the deficiencies of graduates of German highschools and universities stated by experts of economy and education in the context of a research project on electronic specialized information.[1] Libraries have the necessary experience in using information systems and in teaching. However they need to give this field of tasks more attention and develop the existing approaches in a systematic matter.

In the first part of my lecture I will give an overview of the first promising but nevertheless unsuccessful activities in user education and the pragmatic renewal. In the second part I will outline the new initiatives towards more efficient user education and their perspectives.

2. Unsuccessful activities and pragmatic new beginning

A reorientation towards user expectations and user services took place in German libraries as a result of democratic movements and educational reforms in the seventies. Fundamental results were the opening of former closed stacks and the expansion of reading room capacities. In particularly users got direct access to up-to-date literature. These new and easier possibilities of using the information offer of the library were accompanied by new demands on the users. They needed new additional knowledge and skills in retrieving the increasing amount of literature in the open stacks of the library and in using the reference information, especially the catalogues, in an efficient way. Because of these new requirements big academic libraries in Germany began to offer courses for library users.

After having made some experience it was obvious that apart from the existing expert knowledge librarians need additional pedagogical qualifications and better organizational conditions to ensure efficient courses. Recommendations in that direction were developed in a project at the end of the seventies. The results were very promising and can already be used in our nowadays situation as can be seen by the following shorted demands of the final report[2] :

- Integration of library courses into regular teaching acitivities of universities
- Increase of pedagogical qualification of the teaching librarians
- Differentiation of courses according to information needs
- Planning, coordination and realization of courses according to learning targets
- Sequential graduation within and between courses according to results of the psychology of learning
- Improvement of independent and self-regulated learning
- Increase of activating teaching and learning methods
- Using of new teaching media
- Evaluation of teaching programs

Only a few of these demands and proposals i.e. a model of user courses for newcomers[3] were realized. There had not been enough resources and initiatives for a systematic and sustainable development of teaching tasks in German libraries.
During the eighties the activities in the field of user education were reduced in nearly all libraries. The main reasons for this negative development were:

- Focus of innovation activities on rationalization of library administration especially in electronic cataloguing
- Missing staff resources for systematic further development of teaching activities
- Considerable neglect of expectations and perspectives of users especially on forming and providing information concepts
- Missing adult education courses for those willing to take on pedagogical tasks
- Low prestige of education and teaching in society and politics

New initiatives and activities came into existence at the beginning of the nineties as a reaction to the increasing need demand on help during the introduction of new electronic information systems like OPAC and bibliographic databases on CD-ROM. Contrary to predictions of some computer and information scientists the new information systems, which at first sight seemed to handle easy, led to a remarkable increase in tuition activities by the reference librarians.

Factors strengthening these developments were a new attractiveness of the libraries and the increase of expectations concerning the individual support for persons seeking information. The attractiveness was a result of newly established electronic information services combined with a flexible access by the newly installed PC workplaces. An indicator of this was the frequency some reference databases were used while the printed version had often been covered by a lot of dust because they had been used. The complexity of the electronic information systems, especially their potential of information and retrieval possibilities, led to an increase in expectations. While users in the age of printed information had been satisfied by getting a single hint which bibliographic resource to consult they now expected an exhaustive introduction in the handling and functions of the information systems. If systems were too complicated, it was the reference librarians who performed search. The library users were happy and the librarians were stressed. Time for advising and supporting increased in a drastic manner.

This development was the main reason for the expansion of user education. The courses were offered as a reaction and can be characterized as pragmatic and object orientated. They were pragmatic because they were not integrated in a pedagogical concept with broad educational targets. They were object orientated because their focus was on transmitting the skills to handle one particular information system i.e. an OPAC or a database. Often the course structure was derived from the handbook of the producer. The courses, being repeated in certain intervals, were self-contained entities of 1 or 2 hours without any relation to other courses in methodology or content.

The most important advantage of the pragmatic user education were the relative low level of expenditure in persons and organization that has to be invested for planing and realizing the courses. Handbooks offer a very good orientation.

Disadvantages of this approach became obvious very soon as the number of information systems offered by libraries increased rapidly. The increasing number of information systems and the frequent changes of the user interfaces led to exceeding demands on user education, which libraries were unable to satisfy.

Additional disadvantages of this pragmatic approach were the low motivation potential and the missing possibilities of a didactic coordination between the different courses. The dominant orientation towards technical skills at handling the information systems offers few possibilities of building up relations to realistic situations of everyday life and demands of individuals. Thus there was no high level of motivation.
The focus on specific information systems prevents the teaching of complex capabilities. For the teaching of these capabilities several courses are required based on top of one another. The courses will tend to redundancies and an overload in contents, because i.e. all functions of Medline will be treated in a course of 2 hours.
These disadvantages have a negative impact on the image of the user education of libraries.

For these reasons new activities at the end of the nineties were started intending the improvement of user education in German libraries.

3. New systematic approaches in user education

Common characteristics of the new activities are the orientation towards new pedagogic concepts and foreign developments. In the following we will deal with this before we will outline two new approaches and perspectives.

3.1. Impact factors of new teaching concepts

New teaching approaches in German library teaching activities are influenced by the following factors

- curriculum theory
- Anglo-American models of information literacy
- activating and learner centered teaching/learning methods
- online-learning methods and techniques

The curriculum concepts, substantially developed in the US in the seventies, offer ideal instruments for a change in perspective and for restructuring the courses of user education. The primary reference point for structuring the courses according to this concept were no longer the information systems but the participants of courses with their qualifications and interests. The contents of the courses are related to the learning targets in a functional way; additionally methodological and media-technical aspects are considered for optimizing the learning process. The concrete realization is to be seen as an iterative process characterized as an ideal combination of the different factors. For example the criteria for reducing the content had to be derived from the sequences of learning targets and changes in the composition of the group of participants. In relation to the concrete object of databases this would mean that details of a research instrument will not be treated in an introductory course. A lot of teaching activities, especially in big academic libraries, are now based on small curricula and learning targets.

The Anglo-American models of information literacy are of significant relevance for extending the content and methodology of the new approaches in German user education. Especially the models "Six Big Skills" by Eisenberg/Berkowitz and "Information Search Process" by Kuhltau, differing widely from one another[4], have been of great importance because they stimulate a differentiated perspective of individual information processes and by this of the functional relation of information objects of libraries. The models facilitate a structuring of the content based on psychology of learning and qualify of the importance of information objectives offered by libraries. Additionally they offer new ways of coordinating library teaching activities with regular courses of the different faculties. The models offer a common perspective and an integrating instrument for sharing the contents between the different teaching actors and coordinating them. – The importance of these models in Germany is primarily restricted to planning activities and less obvious in practical courses.

Activating and learning-centered methods, developed in recent years from results of the psychology of learning, have a great influence on the methodological performance of library courses. The essential characteristic of these methods is the provision of creative and research orientated possibilities of learning. The participants of courses should determine and control their process of learning as far as possible on their own. Although this was accepted in principle by teaching activities in German libraries a lot of compromises had to be made because of the unfavorable conditions of realization.

Online-learning as a new methodology and platform for teaching knowledge and skills is a factor of rapidly growing importance in teaching activities of German libraries. The user of this kind of library courses should have the opportunity to get the intended competencies in a flexible and self-directed way by using the learning systems. The development of a such a learning system necessitates a lot of work for making a thorough didactic analysis, for a detailed methodological planning and for getting the requested technical competencies and equipments. – Because of these high demands only a few simple results are produced by teaching activities of German libraries.

3.2. The modular teaching approach

The modular teaching approach was developed at the University library of Heidelberg as the result of a lot of experience and learning in the nineties[5]. The main characteristics of the present teaching activities are:

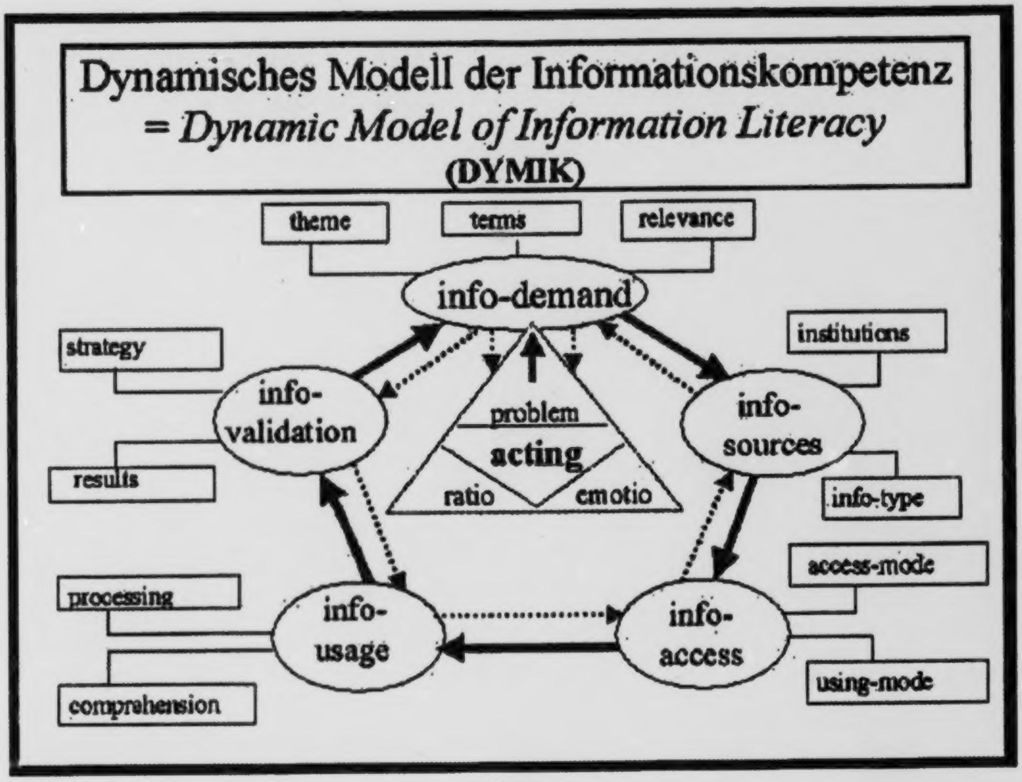
- Small teaching units (1-2 hours)
- Teaching modules integrated by a curriculum
- Complementary online-tutorials
- DYMIK as a model of information literacy which provides a base for developing and reflecting the teaching activities

The small teaching units are necessary because of the staff and organizational conditions at the University of Heidelberg. Only three persons belong to the department of user educations and adult education for librarians. Additional support can be got by staff of the reference department. As the courses of the library are not integrated in the curriculum of the faculties the participation is optional. As students will thus only spent a short time on the learning opportunities we offer courses as small packages. In spite of this optionality in 2000 our 316 courses were visited by 2342 students which is a remarkable result – probably the best result of German libraries.

The courses can be seen as teaching modules connected to one another by a small curriculum. The competencies and learning targets of information literacy are distributed between the courses which are differing in their focal points such as "introduction to library building and services" or "finding information by using catalogues". The different taxonomies with their possibilities of differentiation of learning targets according to abstraction (e.g. broad and precise targets) or levels (e.g. knowing or understanding) are of fundamental importance. They are the facilitating basis for the didactic reduction of the content and hierarchical sequencing of novice and expert courses. We now offer 4 basic courses with complementary contents in library, catalogue, internet and databases. To get all the fundamental capacities dealt with in the four courses one has to spent 6 hours in total. In the expert courses concerned with using specialized information efficiently participants are expected to have already acquired the fundamental competencies.

The courses at university library of Heidelberg are completed by Online-Tutorials concerning the building with its conventional services and the catalogue. The important benefits of these tutorials are their flexibility in time and location. They can be used from every workplace with internet-connection.
In the last year we attained high usage statistics of the online-tutorials. Especially the "virtual tour" through the library was called up 5430 times. We assume that this will take some of the load off the courses offered by libarians. We intend to extend our activities in this field and we are considering an integration in the new e-learning activities of the university of Heidelberg.

An additional element of the approach was the development of the "Dynamic Model of Information Literacy" (DYMIK). It is based on the Anglo-American models of information literacy and was adapted to our special requirements and can be seen in the graphic below.
This model has become a factor of fundamental importance for the teaching activities at the University of Heidelberg. The most important aspect is the visualization of the information process by reducing the complexity to a visible degree, necessary for using it as a didactical and methodological instrument. It facilitates the coordination of teaching activities with faculties, the reflection of the information process as a teaching object, the functional structuring of the large number of information systems offered by libraries and the importance of methodological competencies for efficient use of information. The model differs from the former Anglo-American models by emphasizing the dynamic aspects represented in the circle structure, by focusing on human action with its emotional and rational components and last but not least by using the German language as a fundamental condition to enhance the profile of librarians in the discussion of building up the information society.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results
institutions
info-sources
info-type
problem
acting
ratio
emotio
processing
info-usage
comprehension
access-mode
info-access
using-mode

3.3 The project orientated approach

The project oriented approach was developed in the last few years at the department of library and information at Hamburg University of Applied Sciences (Fachhochschule)[6].

The main characteristic of this approach is the use of individual thematic problems or interests as starting points to trigger processes of learning. So the learning of competencies of information literacy can be integrated with contents of other fields like economy or history. The participants of courses are not obliged to learn skills in information literacy under traditional conditions of structured teaching. The teacher takes a passive role restricting himself to assistance on demand. The participants have to be active and are mainly responsible for their strategies and their results.

By using this approach more time has to be taken in account for the teaching or learning activities. In practice one course unit is given 3 hours because the participants need time for progressing by trial and error and organizing themselves in group activities. For teaching more comprehensive contents courses of this kind may take several weeks. The different units are integrated loosely by the superordinate theme or problem.

In the context of this approach an online-tutorial "Der schlaue Det" was developed. It is an ideal complement because it gives students opportunities of acquiring missing knowledge by using the tutorial in a flexible way. The tutorial offers the users additional instruments for learning as for example questions for auto-control and communication to get in contact with the librarian as an expert of information literacy.[7]

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Using this approach requires basic knowledge and some experience in the methods of moderating and activating groups. Although the learners are to be active primarily the teachers need to have a high degree of expert knowledge necessary for planning favorable learning conditions and cooperating with other experts in this field.

3.4. Prospects

Teaching activities of many libraries in Germany are now orientated towards these two approaches. Modularized concepts are now offered by a lot of university libraries and methods of activating participants are realized in nearly all teaching activities.

The experiences are ambiguous because most librarians are not qualified for taking on teaching tasks. They lack pedagogical knowledge. To compensate these deficienciescourses on planning and realizing user education were offered during the last two years. The participants got basic knowlege and experience in didactics, pedagogical methodology and psychology of learning. Additionaly regional meetings were organized to improve the exchange of experience.

As a by-product of these activities the "Arbeitsgemeinschaft Informationskompetenz" (AGIK) was founded as an informal organization. It is used as a network for the teaching librarians in Germany to exchange experiences and to build up a minimal organizational platform for common activities in the field of user education. The technical instruments are the web-site at Hamburg University of Applied Sciences and the AGIK-mailing list on an server of the University library of Heidelberg.[8]

The new activities were honored by a great success this spring: For the first time in the history of German library conferences a session on "user education" had been accepted in the main program. And participation was overwhelming. While academic librarians reported on their experiences of more comprehensive concepts the librarians from public libraries gave an overview of their teaching activities which are limited to internet courses.

Perhaps you might have got a wrong impression of the teaching activities in Germany. Although there are a lot of activities these are not the result of a systematic development but primarily the result of a lot of individual initiatives. This will not be enough for a sustainable development of user education in German libraries. What would be necessary is the institutionalized support by library organisations or library institutions. Single libraries are not able to develop appropriate didactic approaches and methods for the realization of more efficient courses and to support the implementation at other libraries. But first steps towards more efficient teaching activities are to be seen in the reforms of curricula for librarians. They are just going to integrate pedagogical competencies.

4. Summary

In Germany the conditions for improving the teaching activities of libraries have changed since a couple of years in a fundamental manner. While educational issues had been of secondary importance during the eighties and nineties now concepts to improve the quality of all kinds of education are discussed as being of fundamental importance for the future of our society.
The politicians ask for more competence in methods for efficient handling of information and the ability for lifelong learning. Librarians may can take a new role in our information society because they have the competencies. First steps in this direction have been done by approaches outlined here. The continuation and systematic expansion of these teaching activities will be a chance for German libraries. They can perform the function of learning centers in the modern information society and become the basis for the new self-determined learning approaches. I agree with Barbara MacAdam who wrote in a recent publication " librarians have probably never been in a stronger position as a profession to engage in the research necessary to meaningful solutions".[9]

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[1] Further information on these deficiencies and demands of the experts can be found in the results of a research project of the German Federals Ministry of Education an Science Research at the University of Dortmund. The aim of this project is the improvment of the conditions for effective use of electronic information sytems. (see: http://www.stefi.de)

[2] Sauppe, Eberhard/Müller, Hartmut/Westermann, Rolf: Benutzerschulung in Hochschulbibliotheken: Ergebnisse einer von der Deutschen Forschungsgemeinschaft geförderten Grundlagenuntersuchung, München: Saur 1980, S. 213 ff

[3] The proposal on developing a model of user courses for newcomers was realized by a subsequent project at the City and University library of Frankfurt in 1979/80. Details, especially the interesting methods of development are published by Naumann, Ulrich: Ein Modellprogramm für die Erstbenutzerschulung, Berlin, Deutsches Bibliotheksinstitut 1982.

[4] The differences are outlined in Homann, Benno: Informationskompetenz als Grundlage für bibliothekarische Schulungskonzepte, in: Bibliotheksdienst (2000) 6, (http://www.dbi-berlin.de/dbi_pub/bd_art/bd_2000/00_06_03.htm . An overview of the different models and their practical relevance are given by Thomas, Nancy Pickering: Information Literacy and Information Skills Instruction: Applying Research to Practice in the School Library Media Center; Englewood, Col.: Libraries Unlimited , 1999

[5] More information on the structure and details of this approach can be found on the website of the University library of Heidelberg (http://www.ub.uni-heidelberg.de/allg/schulung.html) and in the following publications: Homann, Benno: Schulungen als Aufgabe einer benutzerorientierten Bibliothek, in: ZfBB 43 (1996) 6, S. 569 – 613; Homann, Benno: Informationskompetenz als Grundlage für bibliothekarische Schulungskonzepte, in: Bibliotheksdienst 34 (2000) 6, S. 968 –97 (http://www.dbi-berlin.de/dbi_pub/bd_art/bd_2000/00_06_03.htm Stand: 31.5.2000); Homann, Benno: Das Dynamische Modell der Informationskompetenz als Grundlage für bibliothekarische Schulungen, in: Knorz, Gerhard / Kuhlen, Rainer (Hrsg.): Informationskompetenz – Basiskompetenz in der Informationsgesellschaft, Konstanz: Universitätsverlag, 2000, S. 195 - 206

[6] More information on this approach can be find in Dannenberg, Detlev: Wann fangen Sie an? Das Lernsystem Informationskompetenz (LIK) als praktisches Konzept einer Teaching LibraryAusführlichere Darstellung dieses Ansatzes, in: Bibliohtheksdienst (2000) 7/8 (http://www.dbi-berlin.de/dbi_pub/bd_art/bd_2000/00_07_13.htm, Stand 1.8.2000)

[7] To get a more detailed impression look for http://www.bui.fh-hamburg.de/projekt/det/tutorial/index.html

[8] On the homepage of AGIK (http://www.bui.fh-hamburg.de/projekt/agik/index.html) further information are to be found.

[9] MacAdam, Barbara: From the Other Side of the River: Re-Conceptualizing TheEducational Mission of Libraries, in: Bahr, Alice Harrison (Ed): Future Teaching Roles for Academic Librarians, New York/London/Oxfor: Haworth Press, 2000, p. 77

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User education: training the librarians to use new technologies in the developing countries

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Give a man a fish, he will have a meal; teach him how to fish, he will eat all his life

This old Chinese proverb amply highlights the need of user education for all branches of human knowledge.

1. Concept of User Education:

The concept of "user education" is differently understood by different people. According to Jacques Tocatlian, former Director, General Information Programme of UNESCO, user education and training has been defined in a generic way to include any effort or programme which will guide and instruct existing and potential users, individually or collectively, with the objective of facilitating :

a) the recognition of their own information needs;
b) the formulation of these needs;
c) the effective and efficient use of information services; as well as (d) the assessment of these services.

2. Components of User Education:

Generally the user education includes the following four inter-related areas: (a) user awareness; (b) Library Orientation; (c) Bibliographic instruction; and (d) Interest profiling (user profile). In the absence of credibility of libraries among the users, especially in the developing countries, users awareness becomes an essential component of user education. User awareness aims to increase awareness of the library as a primary source of information and as an agency to which users may turn for assistance with their information needs. To meet the individual research requirements of users, interest, profiling becomes essential. Interest profiling involves coding profile terms, preparation of reader's profiles and document profiles, and formulating research expression. The service is basically meant for specialists. Advent of information technology (IT) has opened new vistas of user education. How to use IT is a big question not only for users but also for the librarians who handle IT.

3. Information Technology and User Education in Developing Countries:

The print media, non-print media, micro-media, quantitative growth and quantitative complexity of the reading material make literature search and use difficult for the user. The information retrieval systems, and the latest modes of Information Technology transfer all make user education imperative.

Retrieval of information from various databases located at far off places involves computers, telecommunication system and electronic devices. The optimal use of online information retrieval system requires good training on the part of user/ searcher. With the increase in the number of databases available in various disciplines, the need for user training becomes obvious., this education need not necessarily to be tuned to technical skills of computer hardware, but direct itself to the basic elements of utilization of the system. Training may be formal, where researcher have gone through organised training seasons/workshops, or it may be self-training or in-house training is present through programmed instructions, known as Computer Assisted Instruction (CAI), which is an effective method of training in the use of online information retrieval systems. A variety of electronic gadgets, equipments machines and techniques are involved in this process. There is a need of learning how to use modern technologies involved for the purpose. This type of training is required to be imparted not only to the end-users but also to the searchers or intermediaries who are librarians or information professionals. In fact, first of all, the librarians/ library professionals should undergo this type of user education in order to handle the equipment and make searches efficiently for the end-users. Subsequently, the end-users of the library should also be provided such training by the library professionals, from time to time.

4. Proposed Types of Training Needs:

Keeping in view the literature explosion, technologies development and need of the users, there is a dire need to impart necessary training to the librarians in the developing countries to use the new technologies. In order to ascertain the type of training required for the working librarians, the author of this paper informally interviewed about 150 librarians working in different types of libraries (i.e. academic, public and special libraries) in the northern India, during the period November 2000 to February 2001. An overwhelming majority of the respondents opined that the proposed training should be imparted in the following areas. Since India is one of the fast developing countries of the world, the opinion of its librarians hold good and are applicable / suitable to most of the developing countries of the world. Proposed Areas in which Librarians Should be Given Training in the Developing Countries:

(i) Information Technologies Infrastructure:
- Software and Hardware basics;
- I.T. based library & Information Services;
- Library Automation; Bar Code Technology; etc.

(ii) Tele-Communication Technology:
- Networking basics;
- Electronic-mail
- Voice-mail
- Tele-conferencing technique;
- Multimedia;
- Fax; etc.

(iii) Electronic Publishing:
- Desk Top Publishing (DTP), etc.

(iv) CD-ROM and DVD Databases:
- Bibliographic databases;
- Numerical / Non-Bibliographic databases;
- Textual (Full Text) databases; etc.

(v) Creation of Electronic Sources of Information:
- Web designing and development;
- Cataloguing of electronic sources;
- HTML and JAVA basics, etc.

(vi) Internet-based Library & Information Services:
- Electronic Journals;
- Electronic publications;
- Net-surfing;
- Search-engines;
- Web-based Database services, etc.

(vii) Online Electronic Sources of Information:
- Online databases;
- Online databanks;
- Online literature searching;
- Downloading
- Output formats, etc.

(viii) Electronic Libraries:
- Concept of Electronic Libraries / Digital libraries / Virtual Libraries: Their Merits and Demerits;

(ix) Cost-Benefit Analysis:
- Economics of online searching Versus CD-ROM Database searching;
- Suitability for Developing Countries; etc.

(x) Creation of Indigenous Databases:
- Methodology & Techniques;
- Problems & Prospects.

(xi) Online Public Access to Catalogues:
- OPAC;

- MARC;

5. Needs of Hands-on Experience / Practical Training:

The above mentioned areas to be covered for imparting training to the librarians working in different types of libraries and information centres are not conclusive. Various other areas / topics can be added, keeping in view the need of society at large. But it is a very essential that practical training i.e. hands-on experience to use the new technologies is emphasised instead of only theoretical teaching. Actual use of the equipment, electronic gadgets, devices, and technologies would really benefit the librarians who are intermediaries between the procedures of information and the end-users.

6. Duration of Training:

The duration of training for the above mentioned components of IT should be between 6 weeks to 12 weeks. The training should be intensive, developing skills and professionalism. The said duration can be at a stretch or in piece meals, depending upon the feasibility, staff strength, possibility of sparing the librarians from the libraries for the purpose and other related factors of the parent organisations.

7. Agencies Which Should Impart Training:

The short term training courses should be organised by certain reputed and accredited national agencies like National Documentation Centres, National Information centres, Departments of Computer Science & Applications in the Universities, Institutes of Engineering & Technology and similar other organisations / institutions possessing satisfactory infrastructural facilities. National Library Associations and State Library Associations can also undertake such training programmes provided that these can arrange the necessary infrastructural facilities and expert personnel for the purpose. Private, commercial and business organisations should be considered only very rarely when other agencies mentioned above are not available for the purpose. The primary aim of these commercial organisations is to fetch money. Hence their fees or charges are very high as compared to the outcome. But certain large libraries can also think of conducting such training programmes within their premises by hiring the experts provided that necessary infrastructural facilities are available or can be managed conveniently and to the satisfaction of the experts concerned. The training programmes being organised by certain International organisations and agencies such as *IFLA-ALP Programmes, UNISIST-FID-IFLA Summer Schools for Advanced Information Work, UNESCO-PGI Programmes*, etc. are also being conducted in different parts of the world, from time to time, which are very useful effective and reputed.

8. Frequent Updating of Specialized Training & Skills:

Since the modern technologies are changing very fast and more sophisticated equipments and facilities are being developed very regularly, it is very essential to update the training and skills to handle and operate the same.

It is very difficult to suggest the definite frequency for updating such in-service training. But whenever new equipments with improved version are acquired, necessary training to handle the same should invariably be undertaken or arranged in order to achieve proficiency and efficiency to operate. This would lead to optimum utilization of the equipment and greater benefit to the parent organisation as well as the end-users in the long run.

9. Training for the End-Users:

The librarians handle computers, networks, databases, databanks, transmissions, communications, literature searching and operate highly sophisticated modern technologies not for themselves, but for those who need. They act as intermediaries, as information brokers, as information disseminators and as a link between the producers of information and the end-users. Such a training for the librarians is very essential, there is no doubt about it. But, after acquiring necessary training in the areas listed above, or updating the same, they should not only utilise the skills for operating themselves but also impart training to the researchers, teachers, scientists, technocrats and similar other potential users of the libraries and information centres within their organisations. Training by the librarians to the end-users would make them self-sufficient, independent, proficient and confident to handle the equipments for storage, retrieval, transmission and processing of the required information, as per need, scope, coverage, comprehensiveness, search strategy and format of output. Such a programme and arrangement should be a regular feature of the library / information centre/organisation concerned. The training of the end-users can be planned in phases, in optimal size of groups, after regular intervals. But only the potential library users should be considered for this purpose. This would not only lead to maximum utilization of the library resources, facilities and equipments, but also reduce the pressure of work on the library personnel. This would pave way for improvement of library & information services, efficiently and better results. Such trainings and user education programmes would lead to overall national developments and plans.

10. Conclusion:

To conclude the paper, it may be stated that any training programme of user education needs, for its success, an explicit statement of objectives, availability of infrastructural facilities, efficient trainers, careful choice of teaching methods and systematic evaluation. Objectives should be defined keeping in view the new developments, needs and ultimate benefits. For teaching or imparting training, hands-on experience, demonstration and practical approach should be preferred. The programme should be subjected to evaluation so far as to provide feed back for modifying and improving the teaching-learning situations. In fact, the library users should not be overlooked or relegated to a place of secondary importance. Training the librarians to use new technologies would go a long way to help the library users the end-users in the developing countries. User education should be taken as a means to an end and not the end in itself. Hence, it is the most important factor to achieve the ultimate goal i.e. optimal utilization of resources, confidence, self-sufficiency and economy leading to over-all developments at national and international level.

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The Construction of Infrastructure for Library's Digital Document Telecommunications

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Abstract:

The construction of infrastructure for library's digital document's telecommunications is one of the most difficult and headache problem, which is lying in front of our librarian. For solving this problem, the author tries to analyze the library's work in this knowledge age. In this paper, the author emphasizes on the topologies of library LAN cabling system, using the PDS system for the library's LAN cabling work, selecting the transmission media for library's electronic document's transportation, and distributing the outlets for library's digital document's transportation. The conclusion is that the librarian should follow the scientific innovations in this knowledge age, otherwise it would be abandoned by the society.

On the Cross Road of the Library's Work in the Knowledge Age

We had entered into the new century with unprecedented changes. The social production forces of the world had been tremendously increasing then ever before. So the libraries had been greatly influenced by the constant upgrading and expansion of the information and communications technologies. It is becoming more sophisticated diverse and wide spread means of communication and proliferation of the information formats. Anyhow, if we look back the changes in the library world in the past century, we can experience a certain stability and continuity throughout the greater part of the 20th century. In China, since the paper replaced the bamboo slip, wooden tablet and silk, the printed matter had still dominated the library for more than 1,500 years. In the most time of the last century, it is still continuing in spite of the scientific innovation of the microform, photography, telecommunication, Xeroxing, faxing etc. By the end of the last century, the creation of computer, the electronic networking, the electronic data, multimedia, etc. had appeared in front of our librarian. These will lead us to consider the electronic service, and electronic consultation. The library users will be no longer requested to visit library building in person for their consultation or borrowing the library materials. They can access the information and library materials from the comfort and convenience of their home or offices. For more changes on the horizon will not only affect the library's services, but also the library's users. There is a Chinese saying of "Survival of the fittest". That is to say: if the library will not catch up with the scientific development, it would be abandoned by the society. Therefore, we should be aware that the trend of the scientific creation. At least, we have to follow closely the social development in this knowledge age.

The important factors can be pointed out one after another, but we have to face the facts of the most difficult problems of the construction of infrastructure for the future library's digital document telecommunication. So, I would like to emphasize on this matter, which include: the topologies of the library LAN cabling system, using the PDS for the library's LAN cabling work, the transmission media for library's electronic documents' transportation, the distribution of outlets for library digital documents' transportation.

The Topologies of the Library LAN Cabling System

Modern library buildings require an effective telecommunications infrastructure to support the wide variety of services that rely on the electronic transportation of the information. The infrastructure can be treated as the collection of those components (telecommunication spaces, cable pathways grounding wiring and terminal hardware, etc) that provide the basic support of the distribution of all information within the library building. Therefore, we have to build the LAN (Local Area Network) to meet all these new functions.

LAN is a pre-planned communication system in a library building. It allows all the users to share the same device, and information. The LAN's typically range in size from a small group of users to thousands of users in a multi-story building or in a campus environment.

The main characteristics of the LAN are as following:

(1) The limitation of the data transport distance from 0.1-25km.

(2) The speed of data transportation is quite high, from 1-10mbps.

(3) The lower mistake rate, from 10^{-8} to 10^{-11}.

Moreover, there are three classical topologies typically used with Local Area Network.

Bus Topology: In this topology, all the workstations are attached to a single cable, and each end is terminated with a signal dampening device call a terminator. Taps are attached to the bus where drop cables are required and the drop cable interconnected to bus to the hardware device. The distinguishing feature of the bus topology is that the data from any of the station will be transported in this cable and will be received by all other stations. The strong points of this bus topology are easy cabling, high reliability and easy expanding.

Star Topology: This topology is characterized by a central hub with each workstation connected to the central hub by a dedicated line. The central hub may be in the form of a mini-computer or the mainframe, or an active concentrator, or multi-port repeater. The strong point of this star topology is easy to establish the networking and easy to control it, but the reliability is not so high.

Ring Topology: The ring topology has network devices connected via a closed loop with data packets travelling completely around the network. So, each user can access the data from any other on the ring. There are also a counter-rotating ring, primarily use in backbone applications, provides a secondary ring as a back-up path as a level of redundancy to the primary. If the primary ring fails at any point, the failed device is by passed and the data can flow in the opposite direction on the secondary ring to include all the remaining devices. In the ring topology, there is only on path within the neighbor taps. So, it will simplify the control of the path selection. The ring topology has two shortcomings. One is that if the quantity of the taps is too much, the speed of the data flowing will be slowed down and will be prolong the data travelling. The other problem is that the loop structure is closed and it will not be easy to be expanded.

Using the PDS (Premises Distributing System) for Library's

LAN (Local Area Network) Cabling Work.

In today's increasingly complex telecommunications environment, the library work is enhanced by the use of computer-based system. Further more, it should be comprised not only traditional voice, data, and video telecommunications, but also with the building's other signal systems, including the security, alarms, and energy management, etc. Therefore, we have to use the PDS to accomplish this task.

The PDS (Premises Distributing System) includes six subsystems. There are: the working area subsystem, the horizontal subsystem, the management subsystem (or the telecommunication closet), the backbone subsystem, the equipment subsystem, and the entrance subsystem.

The Working Area Subsystem: The working area cabling extends from the telecommunications outlet/ connector end of the horizontal cabling to the working area equipment. The equipment can be any device including, but not limited to telephone, data terminals and computers. The cabling is known as drop cable. The working area cabling is critical to a well management distribution, however, it is generally non-permanent and designed, so that it is relatively easy to change. The working area cabling may vary in form depending on the applications. A cord with identical connectors on both ends are common used. When application specific adaptations are needed at this area, they shall be external to the telecommunications outlet or connector.

Some of the most commonly encountered adaptations are:

(a) A special cable or adapter is required when the equipment connector is different from the telecommunication outlet or connector.

(b) A "Y" adapter is required when two services run on a single cable.

(c) Passive adapters may be needed when the cable media in the horizontal cabling is different from the cable media required by the equipment.

(d) Active adapter may be needed when connecting devices used different signaling schemes.

(e) Some telecommunications equipment (e.g. ISDN terminals) requires termination resistors in the working area.

(f) In some cases, pair transposition may be necessary for compatibility.

Some of the cabling adapters in the working area may harm the effects on the transmission performance of the telecommunication. So, it is important that their compatibility with premises cabling and equipment be considered before they are connected to the telecommunications network.

The Horizontal Subsystem:

The horizontal cabling runs the cable horizontally along the floors or ceilings in the building. It extends from the working area to the horizontal cross connect in the management subsystem (or telecommunication closet). It includes the horizontal cables, the telecommunications outlet/connector in the working area, the mechanical termination, and patch cords or jumpers located in the telecommunication closets.

The following considerations must be taken into account when applying the horizontal cabling work.

(a) Image, voice, data communication service.

(b) The buildings' switching equipment

(c) To accommodate the future equipment and service changes.

(d) The choice and layout of horizontal cable types is very important to design in the building cabling work.

(e) It is necessary to accommodate a diversity of user applications in order to meet the requiring changes to the horizontal cabling as user needs involved.

(f) The electrical facilities that generate high levels of electromagnetic interference (EMI) should be taken into account for the metallic cabling. Motors and transformers used to support the building mechanical requirements and Xerox machines used in the working area are examples of these types of sources.

The Management Subsystem (or Telecommunication Closet):

The primary function of this telecommunication closet is for the termination of horizontal cable and backbone cable distribution. The horizontal cables of all recognized types are terminated in this closet on compatible connecting hardware. Similarity, the recognized types of backbone cable is also terminated in this closet on the compatible connecting hardware. The cross-connection of horizontal and backbone cable termination using jumpers, or patch cords allows flexible connectivity when extending various services to telecommunications outlet/ connectors. Connecting hardware, jumpers, and patch cords used for this purpose are collectively referred to as "horizontal cross-connect"

This subsystem telecommunication closet may also contain the intermediate cross-connect or the main cross-connect of different portions of the backbone cabling system. Sometimes, backbone-to-backbone cross-connections in the telecommunication closet are used to the different telecommunications closets together in a ring, bus, or star configuration.

The telecommunications closet also provides a controlled environment to house the telecommunication equipment, connecting hardware and splice closures serving a portion of the building.

Backbone Subsystem:

The function of this subsystem is to provide interconnections between telecommunications closets, equipment rooms, and entrance facilities in the telecommunications cabling system structure. The backbone cabling consists of the backbone cables, intermediate and main cross-connects, mechanical terminations, and patch cords or jumpers used for backbone-to-backbone cross-connection. The backbone cabling also includes the cabling between the buildings.

Some special care should be taken when planning this subsystem.

(a) For the telecommunications closet in each floor, the equipment room and entrance facility, maximum quantity of connections should be estimated.

(b) In planning the routing and support structure for the backbone copper cabling, care should be taken to avoid the areas where sources of high levels of electrical magnetic interference (EMI), such as motors, and transformers may exist.

Equipment Subsystem:

Equipment subsystem may be considered to be a distinct from the management subsystem because of the nature or complexity of the equipment they contain. Any or all of the functions of the management subsystem can be alternately provided by this equipment subsystem.

The equipment subsystem provides a controlled environment to house telecommunication equipment, connecting hardware, splice closures, grounding and bonding facilities and protect apparatus where applicable.

The equipment room may also house equipment terminations (it may contain horizontal terminations for a portion of the building). In many cases, the equipment room contains network trunk terminations and auxiliary terminations that are under the control of the building's cabling administrator.

Entrance Facility Subsystem:

The entrance facility consists of the cables, connecting hardware, protection devices, and other equipment needed to connect the outside plant facilities to the building's cabling. These components may be used for the public network services, private network customer's house services or both. The electrical protection is governed by the applicable electrical codes. Inter-building's backbone cables and antennas may require protection devices. Service providers should be contacted to determine the needs and policies..

The Transmission Media (Cable) for Library

Electronic Document's Transportation

The transmission media is the cable on which the library electronic documents' data is transported. Unshielded twisted pair, shielded twisted pair, fiber optics and coaxial cable are examples of the media.

Twisted-pair cable may support a wide range of applications- from simple voice up to the large bandwidth of ATM-which makes it very versatile transmission medium. There are different types of twisted-pair cable, including unshielded twisted-pair (UTP) and shielded twisted-pair (STP).

Unshielded Twisted-Pair (UTP):

100 ohm UTP is generally constructed with stranded conductor, a thermoplastic conductor insulation, and a thermoplastic jacket (for either plenum or non plenum applications). The transmission rates increase and users migrate require the higher performance UTP cabling. It is important that the mechanical properties and transmission categories of components used in the same cabling system be properly matched to assure a consistently high level of dependability and transmission performance.

The recognized categories of UTP cabling are:

* **Category 3**: This designation applies to 100 ohm UTP cables and associated connecting hardware, whose transmission characteristics are specified up to 16 MHz.

* **Category 4**: This designation applies to 100 ohm UTP cables and associated connecting hardware, whose transmission characteristics are specified up to 20 MHz.

* **Category 5:**. This designation applies to 100 ohm UTP cables and associated connecting hardware, whose transmission characteristics are specified up to 100 MHz.

All cable and connecting hardware shall meet the requirements of the applicable codes in that jurisdiction.

Shielded Twisted-Pair (STP):

Shielded Twisted pair is primarily constructed of two individually twisted pairs of thermoplastic conductors, covered with foil, enclosed by an overall shielded and an overall thermoplastic jacket. 150 ohm STP cable originally designed to be the transmission media for the IBM cabling system. Therefore, it is also called IBM "Type" cable. The construction and performance differs depending upon which type of cable it is, and different types maybe constructed with stranded conductors, either plenum or non-plenum.

Some considerations should be taken care to install the STP cable.

(a) Maximum tensile load for STP installation is 55 lbf.

(b) The cable bend radium shall not be less then7.5 cm for non-plenum and 15 for plenum.

(c) The cable's braided shield shall be grounded at the telecommunications closet to the telecommunication grounding bus bar.

Fiber Optics: A typical fiber optic cable consists of the fiber, with a protective coating, the protective buffer, the strength members, and the outer jacket. The fiber also consists of the core and cladding, constructed of glass or plastic. In most fibers used in the building applications, this coating is 250 microns in diameter.

There are two type of optical fibers, multi-mode optical fiber and single-mode optical fiber.

Th*e multi-mode optical fiber* will allow many modes of light to propagate. The fiber may be either a graded-index or step-index fiber. Multi-mode step-index is manufactured with a definite step between the core and the cladding. Since the core is made-up of one refractive index, the modes travel at the same speed, with the lower order modes reaching the end before the higher order modes causing the pulse to spread out. The graded index of multi-mode has a core, which is made up of many layers of different refractive index materials. The inner layers have a higher refractive index and the outer layers have a lower refractive index. The light travels in an arch due to passing slower through the higher index material, and passing faster through the lower index material. The multi-mode means that it will accept many modes of light because of its large numerical aperture, and it will support both 850 and 1300 nanometer wavelengths.

There are two common sizes of the multi-mode fiber. 62.5 micron core and 125 microns cladding are the most popular multi-mode fiber. From 50 microns core to 125 microns cladding are typically seen in older LANs and commonly installed in Europe during the last decade.

Single-mode optical fiber will allow only one mode to propagate. This fiber is typically a step index fiber. The only axial mode is transported through a small core diameter (7-10 microns). It is used for higher data rate and longer distance requirements.

Coaxial Cable:

The coaxial cable is the copper cable type typically consisting of two insulating payers and two conductors. A central conductor wire surrounded by a layer of insulation is then surrounded by an outer shielding conductor, which is then covered with a second layer of insulation. Some special points should be taken care when making installation.

1) When cable with different impedance is used in a continuous cable bus, impedance mismatches may occur at every point. Where the impedance for each cable is different and where connectors and other components do not match the cable impedance, the mismatches cause reflection (signal reflected back to the source) resulting in attenuation. The effects of impedance are mismatches can result in numerous problems that are detrimental to the operation of the network.

2) For each segment use only one solid-splice cable, or if cable is spliced, use all segments from the same manufacturer and lot.

3) To avoid laying the cable near noise sources, such as electric motor, power cables, fluorescent lighting, and other non-compatible equipment and cable.

4) The bend radius should be no less 10 times the diameter of the cable.

5) Using the proper stripping and crimping tolls and die sets and be careful not to nick or bend the center conductor.

The Distribution of Outlets for the Digital Document's Transportation

The distribution of outlets for library electronic document's transportation should be designed in accordance with modern library's different functions. The following suggestions can be referred for the library's designers in making the digital document transportation.

1. **The electronic bibliographic access service work**. Normally, this section is designated in the bibliographic room because of the important function for the readers when they enter into the library building. Anyhow, the following factors should be considered when designing the access outlets in this section.

(1) The open stack service will reduce the bibliographic users.

(2) The readers can use the terminals in reading area in the library.

(3) The users can access the library's materials at home or office through MAN(Metropolitan Area Network)

(4) The scale of the library, especially the approximately quantity of readers everyday.

(5) Other factors.

2. **Circulation counter:** There are several functions should be taken into account.

(1) Making the readers' registration cards.

(2) The library's books ' check in and check out.

(3) Recalling the lending books

(4) Easy reference work.

(5) The quantity of the outlets designing should also be considered by the approximately quantify of this library's readers daily.

(6) Other factors.

3. **The reading the reference service area;** Some suggestions can be taken for the electronic outlets distribution in these area.

(1) To set 2-4 outlets for the service counter are necessary in this area.

(2) Near the service counter, about 10 or more outlets can be considered for the new comers because it will be easy for librarian to help them.

(3) If it is possible, reach column in this are can set one outlet for the future.

(4) The quantity of the outlets designed should be done in accordance with the reading and reference area.

4. **Outlets for close stack rooms of books, periodicals and newspapers:** Although the library's closed stack is not for the readers to use, it is still necessary to set the outlets for librarian to do the work of bibliographic control. It is no need to design too much outlets for this area; 2-3- outlets in the closed stack management area will be enough, but don't forget the telephone sets' outlets.

5. **The technical Service Department:** It is no need to mention how important of the technical service department in a library. The full automation in this section is one of the important sign in a library. Therefore, we have to make careful designing for this section. Several points can be considered in this area as the following:

(1) To pay more attention to the functions in this department, for instance, the library materials purchasing, cataloguing, bibliographic controlling, management of serial publication, purchasing the non-book materials (including the audio-video materials, CD-Rom, multi-media materials) etc.

(2) The floor planning in this department, the most important thing is to make it flexible.

(3) The quantity of the outlets should be decided by the quantity of the whole library's service readers, the amount of the budget per year, and the staff in this department.

(4) The union catalogue and other regional or local library's professional cooperation work should be considered in the area.

(5) The library's stored materials digitization.

(6) Other factors.

6. **The Service Area of AV and Multi-media Materials:** The quantity outlets of this room will be decided by the coverage area. This area is decided by the location of this library and the quantity of the service readers. Quantity of young adult and the students are the main factor for considering the average area in the AV and multi-media.

7. **The office automation:** This is one important part of library management modernization. Different function in different office should be aware. But one thing we want to remind that each staff has better to have one terminal except the manual labor. Telephone sets should never be forgotten to be included.

8. **Firestopping and Security Alarm:** For the safety of the library's readers and its staff, and for the security of the library materials and equipment, the designing system the firestopping and the security alarm should never be omitted. Therefore, we have to equip the video camera, monitor, thief detector,

smoking sensor (or transducer) and others.

The subsystem of security alarm: The library security alarm should be considered and equipped the applications in the area, which includes the rare books stack room, the sample book stack room, the host computer room, and the storeroom for multi-media, etc. In this area, video camera, thief detector, emergency switch etc. are needed. If anyone enters illegally, the security alarm system will work automatically and it will also start the control system. The video camera will start shooting. In the meantime, the detectors are also needed to build-in the electric left, staircase, public passageway and the entrance area. Therefore, all these should be designing in planing the PDS (Premises Distribution System).

The subsystem of firestopping: The library is categorized the first class of Fire Control Building. The most important areas are included the different stack rooms for rare books, periodicals, newspapers, AV and multi-media materials, the host computer room, as well as the technical service department. So, it is necessary to install the smoking sensor, temperature sensor, fire extinguisher, etc. One important thing we would like to point out is that the lightening arrester should never be forgotten to install in the proper place in order to protect the computer sets and all other library equipment.

The infrastructure for library's digital document's telecommunications may include the hardware, software, platform, and others. For the length of this paper, we hope to have the opportunity to discuss in the future.

Conclusion

Library may not be so important then some of the government's organization, but it would be remained in the social position of the human history because of its function. As we showed the above, the modern science and technology would force the library to change the traditional function. If we, the librarian, refuse to adapt the new scientific innovation, the disaster for the library work is obviously. Therefore, it should never be regarded idly as of no important. This paper is try to help our colleagues to know, to understand, and how to apply the new technology into our library's work of renovation. Actually, it is only like one of the Chinese saying: "Casting Away a Brick in Order to Attract a Jadestone" or " A Modest Spur to Induce Others to Come Forward With Valuable Contributions". So any comment or criticism is always welcome from all of our colleagues and friends.

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Humanizing the Information Revolution

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If a school is a kind of gymnasium for the mind, a library is what the Greeks called Alexandria, a hospital for the soul. However large or small, a library gathers in fragments of what people have known or imagined and gives to others not only a little more knowledge but a little more wholeness. Transfusions of words make connections with collections; and those who have gone before us help us cope with what is to come.

The heart is reading. The vessel is the book. The heartbeat began with man's search for salvation'the Vedas, the Sutras, the Torah, the Koran. The thirst grew not just for preservation but for circulation of stories that gave meaning to life and coherence to communities.

Compendia of written knowledge are of ancient lineage. Paper, wood-block printing, even movable type originated in the Orient. But the great breakthrough in creating the book, as we know it today almost everywhere in the world, was the replacement of the scroll by the codex in the 4th century A.D. in the Eastern Mediterranean. For the first time pages were created, codified, and bound like a modern book; and a reader could move around easily in a text, guided by an index, and was able to compare sources that made correlations possible and raised ever-new questions. Whereas a scroll could contain only about 1,000 lines, a codex could produce a single artifact large enough to contain the entire Old and New Testaments. Thus was Christianity codified into a Bible that still today is the central element in the faith of the two billion adherents of the largest, if most fractious, of the world's religions.

A distinctive new civilization developed in the European peninsula of the Eurasian land mass in the course of the millennium that followed. In Western Europe, where the Roman Empire collapsed, culture was preserved and defined less by power than by those Christian codexes - handwritten on animal skin in liturgical Latin and preserved in monasteries. Institutions called universities grew up after the recovery of pre-Christian classical learning in 12th-century Spain - mediated by Muslims and Jews as well as Christians, though the Muslims were often seen as an external enemy and Jews as an internal enemy of Europe as it moved to modernity.

Then came Gutenberg and the modern book - composed in vernacular languages, printed on paper by a press with movable type in large editions, reaching ever more people with increasingly secular content - and creating in the North American extensions of the North European Protestant Reformation and Enlightenment - the first and only world civilization created solely in the age of print. That the United States of America, the newest of all world civilizations, has been held together for more than two centuries by the world's oldest continuously functioning written constitution is in no small measure because its framers were themselves framed by books. Both the first meeting of the Continental Congress in 1774 and the first meeting of the Congress under our new constitution in 1790 physically took place in libraries - in Philadelphia and New York respectively; and the first committee involving both houses of Congress in the new capital of Washington, D.C., was the Joint Committee on the Library of Congress, founded in 1802.

Self-government became self-correctable and federal officials accountable largely thanks to the First Amendment guarantees and through Congress's free use from the beginning of the Postal Service formed in 1792 to give constituents free information on the activity of their government. Slowly - but not without sustained and unconscionable injustices to Native and African Americans - the United States grew from a republic into a more inclusive democracy. This evolution was driven inexorably, if at times subconsciously, by the realization that the dynamism of a continent-wide free society drawn from many strains depended on more people having access to more knowledge to be used in more ways. The quintessential expression of this ideal is our amazing public library system - for which we must specially thank Justin Morrill in the Congress, Andrew Carnegie in the private sector, and above all thousands of dedicated librarians throughout America whom one of my predecessors, Archibald McLeish, called our "sentinels of liberty." It is appropriate here to pay special tribute to another of my New England predecessors, Herbert Putnam, who came to the Library of Congress from the Boston Public Library, which hosted us all so graciously last night.

American libraries share with American society a tradition of adding without subtracting. New immigrants to America do not evict old inhabitants; and they do not reject, but rather renew old institutions. In like manner, new books do not generally replace old ones in libraries. Books that succeed and often contradict each other sit peacefully next to each other on the shelves, just as readers who disagree work peacefully next to one another in the reading rooms.

But the basic challenge now facing American libraries - and American society more generally today - is whether adding electronics means subtracting books, and losing in the process the values of the book culture that made democracy and the responsible use of freedom possible in the first place. We are, in short, faced with the greatest upheaval in the transmission of knowledge since the invention of the printing press: the electronic onslaught of multimedial, digital communication. It bypasses the traditional limits of time and space and raises the haunting question of whether libraries - those historic houses of refuge for reading, those temples of pluralism and seedbeds of humanism - can continue to serve as hospitals for the soul in a medium that so far basically markets commodities for the body?

To use the language of cyberspeak: Is this post-Gutenberg world that is becoming hominized (that is to say brought under the control of an individual with a keyboard and screen) also becoming dehumanized (no longer serving worthy human ends)? Is communication replacing community? Are the new digital enhancements deepening social inequality by disproportionately favoring those who already have money and education to use them? And above all, is virtual reality displacing real virtue?

Public libraries, by their nature, have constructive answers to all these questions; and American libraries have already prepared themselves by bringing the new electronics more seamlessly and systematically into their traditional services than have many other public institutions.

Let me briefly describe how the Library of Congress has been working for more than a decade now to help meet these challenges and perform its traditional historic functions of acquiring, preserving, processing, and making accessible materials in the new digital age.

The Library of Congress assumed the broad functions of a true national library in the late 19th and early 20th century, when it acquired the mint record of American creativity through Copyright deposit, gathered in most papers of presidents up to Hoover, collected unparalleled records of Native and African American culture, assumed most of the burden of cataloging for the library system as a whole, and produced free materials nationwide for the blind and physically handicapped.

Now the basic direction of where to go beyond electronic cataloging in producing services for the digital age for the Library of Congress emerged from a series of 12 forums that we coordinated with thousands of librarians all over the country in 1988. From these came the idea for the American Memory pilot project with CD ROMS in 44 schools and libraries across the country in the early 1990s. Then, of course, came the explosion of the Internet, and American Memory was amplified in the late 1990s into a National Digital Library, which, by the end of 2000, as our generous introducer has mentioned, had put seven million items of American history and culture on-line. Just as the Library had traditionally lent other American libraries books through interlibrary loans free of charge, we were now providing digitized versions of our massive - and often one-of-a-kind - special collections free of charge to libraries everywhere.

We used part of the private money that largely funded this program to subsidize adding unique American historical materials from 37 other institutions, libraries, and repositories from all over America to this American Memory Web site. We were trying to bring one-of-a-kind primary materials of broad interest and importance from special collections, which only a few had had access to and only in a special place, out to a broader audience but at the same time into the world of books, since American Memory was designed as an archival transfer and bridge to other libraries. We are trying to help bridge the resource gap between major repositories and local libraries; to blend old material into the new technology; and to provide memory for an inherently ephemeral medium that is forever updating information and erasing previous drafts.

What was new for the Library of Congress was the assumption of a broad and nationwide educational function in an institution previously focused on serving the Congress, the government, the scholarly community, and the broader public mainly as a library of last resort.

American libraries have always served as local centers of lifelong learning. So a more active role for the national library was fully in keeping with the growing bipartisan recognition in political Washington that better education is essential for dealing with almost all our national and international problems. By raising large amounts of private, philanthropic money for the first time in the Library's history, we were able to sustain the historical American library tradition of providing to the public even this expensive new type of material free of charge.

As technological change accelerated and the educational crisis deepened in the 1990s, it has become clear that there are three separate, sequential needs each of which has to be met if American libraries are to sustain their historic function of transmitting inert stored knowledge democratically to a broad and diverse population.

First is the need to place on the Web educational content that is easily accessible, of dependable quality, and free of charge for everyone.

Second is the need to provide the hardware and software that can deliver this positive content to public institutions like libraries and schools where everyone can access them freely in local communities everywhere.

Third is the need for human mediators within those public institutions who can serve the special needs of a community and help integrate the new on-line knowledge with the older wisdom in books.

Only the second and the most impersonal of these needs has begun to be met. Both public and private funders in America have been relatively generous in equipping public schools and libraries with the hardware and software for new educational efforts. But the humanizing first and third stages that would provide free humanistic content at one end and humane guidance in its use at the other have yet to be seriously subsidized in America.

The Library of Congress has in recent years been trying to address precisely these two areas of national need with additional new programs that reach beyond our original National Digital Library Program.

For the first stage of generating positive free content, Congress, led by Senator Stevens of Alaska, has begun to extend our national program to a global one by providing funds for a project in which the Library of Congress is collaborating with the national libraries of Russia and with other repositories in both countries. We have already digitized and put on-line nearly 100,000 primary documents that illustrate our parallel experience of these two former adversaries as continent-wide frontier societies, adding bilingual text from our curators. We have started another such project with Spain, and are in advanced discussions with two others. Our collaborative multinational projects are becoming more widely accessible through the electronic gateway of the Bibliotheca Universalis. Representatives from the G7 and six other European countries are coordinating their policies for digitizing primary documents. All 13 participants have already contributed content for this Web site; and all this should eventually feed into a global on-line library and network.

We are increasingly conscious of the need to help a wider range of people not merely get access to, but creatively use and grow through the materials we are digitizing. In 1996, we introduced the Learning Page, an interactive Web site that helps teachers integrate digital content from the Library of Congress with common curriculum topics. Last year, we introduced americaslibrary.gov an interactive and child-friendly educational Web site to promote intergenerational reading and storytelling. This prize-winning site logged 100 million hits in its first year, though it has only a small range of images. It is being supported by the first-ever nationwide public service campaign conducted by the Advertising Council on behalf of a library program. You can hear more about this from Public Affairs Officer Jill D. Brett on Thursday.

In addition to providing humanizing content at one end of the electronic delivery system, the Library has also been trying in a small way to help develop human mediators at the other end.

A recent Markle Foundation study highlights the need for a trustworthy public face to mediate the Internet, a real person to go to with problems. For years now, we have been conducting summer institutes for local librarians and teachers with expertise for integrating the new electronic materials with the old books. But ours is only a small stream feeding into an enormous and ever-expanding ocean. The imaginative, recent call of the Digital Promise report by Newt Minow and Larry Grossman could open up new possibilities for this massive national training need if money could be obtained from the forthcoming sales of licenses for the electromagnetic airway spectrum.

Something, in any event, will have to be done to equip fully our libraries with knowledge navigators conversant with both the new technology and the old books. And children within schools must have better access to libraries, to books, and to knowledge navigators than they now have. There is presently only about one school librarian for every thousand schoolchildren nationwide.

Our great repositories can do much by sharing on-line more of their rarely seen but appealingly human multimedial and manuscript treasures - and also by inviting more librarians and teachers from their localities into their institutions for substantive visits. Those who work in the educational trenches can become stimulated and inspired - as our summer institute fellows have been almost without exception - by seeing the originals of the documents being digitized and talking with their curators.

The manuscript material now available on-line free from the Library of Congress has direct human interest (Jefferson's working draft of the Declaration of Independence, with all the corrections, you can see their minds at work; the diaries of Teddy Roosevelt and George Patton; Lincoln's handwritten speeches; the letters of Susan B. Anthony and Frederick Douglass). The rich multimedial materials that we now have on-line (like Brady's Civil War photographs; early Edison movies; panoramic, block-by-block aerial images of American cities in the 19th century) appeal to an audiovisually active generation - and, at the same time, raise questions that can only be really answered by going back to reading in books.

The role of the librarian has become more, rather than less, important: to help learners of all ages make connections between print and electronic materials, and to help navigate through the sea of illiterate chatter, undependable infotainment and gratuitous sex and violence that is proliferating and that many say is the only real profit-making on the Internet. The Internet tends to feed upon itself rather than independently validate the material it transmits. You may have seen the lines making the rounds of library e-mail: "A Zen librarian searched for nothing' on the Internet and received 28 million hits."

The Library of Congress is trying to help develop librarianship for the new era through a variety of programs that, like the Internet itself, are inherently cooperative and networked activities. I am glad to be speaking with all of you. We will all have to be working much more interactively together.

Our Collaborative Digital Reference Service now available worldwide 24 hours a day, seven days a week. The first question asked on it a year ago came from a Londoner seeking information on Byzantine cooking. It was routed through a Library of Congress file server and answered in a few hours by a librarian in Santa Monica, California.

We have two programs that have begun to put tables of contents on the Web - throwing open the door to those who browse the Internet for information as well as those who use our on-line public access catalog. One program is an enhancement of the Library's Electronic Cataloging in Publication Program. We now enter some tables of contents directly from the electronic gallies into the on-line bibliographic record without having to rekey the data. A second program scans and provides the tables from already printed publications - encouraging catalogers and reference librarians to decide which are most broadly important.

We have also set up a project to link Library of Congress catalog records with the full-text electronic versions of many social service monographic series of the working paper type, such as those of the National Bureau of Economic Research.

A fourth new program will provide full on-line information about new books (including jacket blurbs, summary, sample text, and author information), and it will be discussed later today in the Open Forum of the Section on Bibliography by John Celli, Chief of our Cataloging in Publication Program.

Finally, the Library of Congress has initiated a project to identify those international Web resources that are of most value to researchers and scholars. When completed, the project will produce an international homepage with pointers to reliable on-line resources for all of the nations of the world. By mid-September, portals for 20 countries will be available to users worldwide.

By far the most difficult new challenge looming for librarianship will be preserving and providing access to "born-digital" materials, that swelling mass of material that appears only in electronic form. We have defined our task at the Library of Congress in recent years as "getting the champagne out of the bottle." But here the problem of capturing bubbles is another matter. Digital material and the technology to use it are constantly changing and evanescent. The average life of a Web site is only about 75 days, and a growing body of important material has already been lost forever.

Election 2000 is our first large-scale collection of data-searchable Web sites to be archived and made available on-line. We chose the subject long before the election became so historic. It was conceived by the Library's specialists and developed in cooperation with the Internet Archive and Compaq Computer. It collected copies of more than 1,000 election-related Web sites, gathering some 2 million megabytes between August 1, 2000, and January 14, 2001, archiving many times a day and often hourly - in order to record candidate responses to each other and to demonstrate at the same time the dynamic nature of Internet content.

Last year Congress directed a major special appropriation to the Library of Congress to develop and begin implementing a national plan cooperatively with other governmental and private institutions in order to preserve for future access important born-digital materials.

Congress incidentally deserves great credit for supporting all the work that the Library of Congress is doing to preserve and make accessible the nation's creative heritage and now much of the world's knowledge.

Consistently for 201 years, on a bipartisan basis, our national legislature has been the greatest patron of a single library in the history of the world. And, in the last decade generous private donors have also helped us in many new ways to get the champagne out of the bottle. Nothing, I repeat, nothing, would be possible, however, without our truly dedicated and diversely talented staff, so many of whom you have had a chance to know at these IFLA meetings over the years. The Library of Congress is doing more work with fewer people than ten yers ago. The staff, which is doing it all, and they are all, as a body and individually, every bit as great a national treasure as our 121 million-item collection.

Electronic networks must become not just technological pipelines for marketing and infotainment, but a healthy circulatory system that regenerates all parts of the body of humanity. And that will not be possible without the heart, which is still reading, and the main vessel, which is still the book.

We are celebrating this year the 25th anniversary of our Center for the Book, which is linked with 43 state centers. On September 8, the Library will be mounting on Capitol Hill the first-ever National Book Festival. It will be hosted by Laura Bush, and I hope many of you will come for the wide variety of all-day, open-air activities that will be available.

Without books, the Internet risks becoming a game without a story - the game of mergers, speculations, increasingly violent video games, a surfing game on the surface of life, motion without memory - one of the clinical definitions of insanity.

The United States was built by people who read stories and did not have much time for games. The biblical story was at the core. The first book published in North America was a rhymed version of the Book of Psalms, often sung in its entirety in Puritan worship. It is from sacred stories that written books emerged almost everywhere; and those who forget altogether their own basic stories will have difficulty understanding those of others, as we must in the global age. If we do not listen to other people whispering their prayers today we may have to meet them tomorrow when they are howling their war cries.

Properly used, the Internet will help scientifically to solve common problems shared by widely dispersed groups in fields like medicine and the environment, and at the same time to share on-line the primary documents that tell the distinctive stories of different peoples. We may even begin to see the outside world as a series of celebrations rather than just a source of problems.

An old Native American came up to me after a speech I gave at one of those forums I mentioned in Nebraska to librarians of the Great Plains states in which I described librarians as gatekeepers to knowledge in the information age. He told me that, even before the culture of the book came to America, the most experienced member of a tribe preserved the stories that contained the collective memory of its people the way librarians later did. "We did not call him a gatekeeper," he gently explained, "we called him the dreamkeeper."

One of the most imaginative of the many uses that libraries across the country have been making of our on-line American Memory materials is to ask students to use them to reconstruct not just the accomplishments, but the dreams of some other people in some other time or place. Electronic technology must be integrated into the world of books - new technology linked with old memories and old values. Above all, there must always be human intermediaries on the spot (teachers, librarians - local dreamkeepers) who can encourage curiosity and direct users back to books as they seek answers to the questions raised by fragmentary electronic materials. No machine can, or should, be a surrogate for direct discourse between people.

Readers enter into a kind of discourse with writers and often find that mute witnesses from the past are often better guides to life than talking heads in the present. For, alone with a book, the reader's imagination is free to roam. Boundaries are not set by someone else's picture on a television screen; thoughts are not drowned out by someone else's sounds on a boom box.

Last year for our Bicentennial we received the greatest monetary gift in our history from John W. Kluge, who has been chairman of the Library's first national private-sector support group since it was founded a decade ago. With his gift, we are setting up a new, and we hope, catalytic center for advanced study in the human sciences within the Thomas Jefferson Building on Capitol Hill, hoping renew the discourse between thinkers and doers that created America in the first place, bringing more of the life of the mind and spirit into the city of power and politics - a little more Greece, perhaps even a little of Alexandria, into Rome. We will be bringing from all over the world very senior scholars both to range widely in our multiform collections and put things together rather than just take them apart. And we will also be bringing to the center very young scholars who are not yet embarrassed to keep on asking big questions.

Our hope lies in the words of the prophet Joel:

I will pour out my spirit on all mankind . . .
Your old men will dream dreams,
Your young men will see visions.

Some of the best analysts of this new digital revolution have suggested that only artists can predict what the future will bring. So I end by quoting one of the great poets: T.S. Eliot's - famous lament, "Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?" But even more, in "Burnt Norton," Eliot somehow suggests that a mix of blood and electricity might yet redeem the petty materialism of the modern world that he had previously seen only as a wasteland.

The trilling wire in the blood
Sings below inveterate scars
Appeasing long forgotten wars.
The dance along the artery
The circulation of the lymph
Are figured in the drift of stars
Ascend to summer in the tree
We move above the moving tree
In light upon the figured leaf
And hear upon the sodden floor
Below, the boarhound and the boar
Pursue their pattern as before
But reconciled among the stars.

Another poem I like to cite was written by an unknown European priest for a nonexistent Asian audience in the already-dead language of Latin. Somehow these lines suggest to me, that whether any of us, we at the Library of Congress, or others in the global networks of the future, will be able to find the means and willingness to understand other parts of the world and of the human past, we will still be ennobled by the effort.

When the Jesuit order left China after the most deeply scholarly and the most nearly successful effort in history to build a cultural bridge between that ancient eastern culture and the Christian west, they left behind, as their last legacy, a haunting epitaph.

Move on, voyager,
Congratulate the dead,
console the living,
pray for everyone,
wonder, and be silent.

Wonder and silence - easier for dreamkeepers than image makers. A library, even a small one in a home or a public place takes us out of our noisy, hurry up, present-minded lives and into what Keats called the world of "silence and slow time."

For whatever the confusion in our minds and the profusion of our electronic information, diverse things do still come together in a book - just as the hemispheres (east and west, north and south) come together in our single, fragile planet, and the left and right halves of the brain in one human mind. And within that mind, as the greatest poet of the English language reminds us at the end of his last play: "We are" - all of us - "such stuff as dreams are made on."

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Bibliographic control or chaos: an agenda for national bibliographic services in the 21st century

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The great irony of our present situation is that we have reached near-perfection in bibliographic control of "traditional" library materials at the same time as the advent of electronic resources is seen by some as threatening the very existence of library services—including bibliographic control. Before considering the question of "cataloguing the Web and the Internet," it is salutary to review the great achievements of the past thirty years—in considering where we are going it is necessary to know where we have been. When the ideal of Universal Bibliographic Control (UBC) was first advanced[i] thirty years ago, the international library community was only beginning to discern dimly the possibilities of the interconnection of international standardization and library automation. International standardization was at a very early stage (far closer to an ideal than a reality) and the ideal of each item being catalogued once in its country of origin—the resulting record being made available to the world community—seemed far from practical realization. Records were exchanged between countries (mostly between national libraries), but in the most inefficient manner possible—print on paper—and, since they resulted from different cataloguing codes and practices, were integrated into catalogues with great difficulty. The choice was between incorporating international records without alteration—something that degraded the catalogue very quickly—or doing such extensive revision (and retyping) that it would have been cheaper and quicker to catalogue the item oneself *ab initio*. MARC was in its infancy when UBC was proclaimed as an ideal,[ii] the International Standard Bibliographic Description (ISBD) was still being drafted,[iii] and, despite the Paris Principles,[iv] cataloguing rules in different countries lacked a common basis for the assignment and form of access points ("headings") and adhered to different descriptive practices. It was, I believe, the confluence of a need (national and research libraries throughout the world needing less expensive and more current cataloguing) and a means (automation and, more specifically, MARC) that has brought us nearer to UBC than anyone would have dreamed possible thirty years ago.

The idea of a universal bibliography is nearly as old as bibliography itself.[v] The idea of economies in bibliographic control by means of sharing catalogue records between libraries (cooperative cataloguing) or purchasing catalogue records for other (usually national) libraries goes back to, at least, the middle of the 19th century. In fact, the American librarian Charles Coffin Jewett drew up his cataloguing rules[vi] specifically for a proposed scheme by which the Smithsonian Institution would produce "separate, stereotyped titles" to be used in the catalogues of American libraries. In these, and in the hugely successful Library of Congress catalogue card service and the *National union catalog* to which it gave rise, we can see bibliographic needs and desires that lacked only an appropriate technology to be met. In hindsight, it is easy to see a trajectory of inevitability that made MARC, the ISBDs, AACR2, and other vehicles of international bibliographic standardization seem more the result of historical forces than the often faltering and separate steps they were in truth. Each of the three standards I mention had original purposes that were quite different from their eventual impact on international standardization. MARC was brought into being originally to facilitate the creation of LC catalogue cards on demand. The ISBD evolved from the Standard Bibliographic Description drawn up by a committee appointed as a consequence of IFLA's International Conference of Cataloguing Experts (IMCE).[vii] The SBD was seen, among other things, as a means of standardizing the *presentation* of descriptive data so that it could be machine-translated into MARC (hence the stylized and individual punctuation). AACR2 was the culmination of decades of effort to bring uniformity to cataloguing practice in the English-speaking world, and, particularly, to reconcile British and North American descriptive cataloguing practices. Each of these three standards metamorphosed and had an impact far beyond the anticipation of all but the most far-sighted. It is instructive to recall how and why each developed and expanded, because we need to understand that the bibliographic world (just like the real world) is full of unintended consequences and the ripples from a stone thrown in one part of the bibliographic pond may eventually cover it all.

The MARC format is, by any standards, an historic achievement. It has been the main force in international standardization from a practical point of view. It is, literally, the engine that has made UBC possible. The journey from the caterpillar of the automation of card production to the beautiful butterfly of today has been long and largely successful. It is worth pointing out, however, that its origins and original purposes (including being a carrier format rather than the way in which bibliographic information is stored and manipulated) have created drawbacks that should be hardly surprising when one considers we are dealing with a 30 year old standard. The structure of MARC is that of the catalogue card, when computer systems call for a different approach. Be that as it may, the fact is that there are tens of millions of MARC records in the world; MARC is accepted and used throughout the world; MARC is the basis for almost all automated bibliographic systems (including commercially produced systems); and, no practically feasible or demonstrably better system has been advocated. It should be unnecessary to point out that MARC is merely a *framework* standard—that is, it is a way of storing and making manipulatable data that has been formulated in accordance with *content* standards (cataloguing codes and the like). I would not trouble to point that out were it not for the frequent references to "MARC cataloguing" in writings about metadata and "simplified" cataloguing. There is, of course, no such thing as "MARC cataloguing"—MARC is the way in which we encode the results of the cataloguing process and has little or no influence on that process.

One of the two documents studied at the IMCE was a comparison of descriptions from cataloguing agencies throughout the world. The document revealed a great commonality of the information found in such descriptions and the order in which that information was presented. It found differences in the abbreviations used and other stylistic matters (mainly due to language differences) but was able to propose a conflation of the descriptions that formed the basis of what became the SBD and later the ISBD. The idea was originally to create a basis for agreement across cataloguing codes on the relatively non-contentious matter of descriptive data. Soon, however, this was supplemented by the idea that universally used distinctive punctuation, clearly identifying the areas and elements of the SBD, would not only aid in the understanding of bibliographic data in unfamiliar languages but could also be used in automatic translation of that data into MARC records. It is no coincidence that the areas and elements of the ISBD correspond exactly to the relevant fields and sub-fields of the MARC format.

In accordance with the theme of stumbling toward standardization, it should be noted that both MARC and the ISBD were developed initially for books and only later generalized into standards for all types of library material.

The *Second edition* of the *Anglo-American cataloguing rules* (AACR2) is, in fact, nothing of the sort. It was politically expedient at the time to identify this new code as a revision of the previous *Anglo-American catalog[u]ing rules* (1968), but AACR2 is completely different from its predecessors in many important ways. One need only cite the facts that AACR2 is a single text (unlike its predecessors, which came in North American and British versions), is the most complete working out of the ISBD for materials of all kinds, and represents the triumph of Lubetzkyan principles, which the first AACR signally did not. Be that as it may, AACR2 quickly transcended even the historic achievement of being a unitary English-language cataloguing code to become the nearest approach to a world code we have. In the words of the introduction to the Italian translation of AACR2:[viii]

Le *Regole di catalogazione*, nella loro seconda edizione, sono il codice più diffuso nel mondo (sono state pubblicate in gran numero di lingue diverse) e l'unico che—di fatto—svolga le funzioni di codice catalografico internazionale. [The *Cataloguing rules*, in their second edition, are the world's most widely used (they have been translated into numerous different languages) and the only rules that are, de facto, an international cataloguing code.]

This state of affairs is partly due, of course, to the dominance of the English language (in its various manifestations) in the modern world. It is also due, in part, to the fact that AACR2 represents the most detailed working out of the principles of author/title cataloguing set forth in the Paris principles and based on the analysis and pioneering work of Seymour Lubetzky;[ix] and of the application of the ISBD family of standards to all library materials.

Here we stand then, on the brink of Universal Bibliographic Control for all 'traditional" (i.e., non-electronic) materials with a universally accepted format for exchanging bibliographic data, a universally accepted standard for recording descriptive data, and a quasi-universal cataloguing code that is either in use in, or influencing the codes of, most of the countries in the world. Is there any reason *in principle* why we should not bring electronic documents and resources into this architecture of bibliographic control? The answer is "no." Are there *practical* reasons why this task is formidable? The answer is "yes."

I have written and spoken elsewhere about the problems posed by electronic resources and the proposed "metadata" approach to bringing them under a form of bibliographic control.[x] I will try here to summarize the arguments put forward in those papers and to propose a direction that I advocate for a new age of bibliographic control. The first issue is that of the electronic resources themselves. Some are closely analogous to print documents—this is hardly surprising as many electronic documents are derived from print documents. Also, there is an established pattern of new technologies adopting the outward signs and structures of previous technologies—just think of radio news "headlines" and of television "magazines" with their "front pages." We even refer to elements of Web sites as "pages." Other electronic documents are quite dissimilar and, therefore, do not immediately seem to be amenable to existing bibliographic control structures. On reflection, however, we can see that there is a commonality between documents that embraces all formats. Electronic documents have titles, dates, texts and illustrations, editions, publishers, relationships to other documents (electronic and otherwise), authors,[xi] contributors, and corporate bodies associated with them. We know well how to deal with each of these bibliographic elements, how to record them, how to exercise vocabulary control, and how to create MARC records that can be integrated into library catalogues. Why then have many people either despaired of bringing electronic documents under bibliographic control or advocated solutions such a metadata, expert systems, and sophisticated search engines as alternatives to cataloguing? I believe there are a number of answers to that question (not excluding ignorance as a factor), but the most important center on the perceived characteristics of documents on the Net and Web.

The attributes of a well-regulated library are well known to us all. They are organization, retrievability, authenticity, and fixity. There are those who claim that electronic documents and sites (assemblages of electronic documents) are different in kind and not just degree from all the other formats that human beings have used to communicate and preserve knowledge across the centuries. (This is not a new phenomenon—just think of the semi-hysteria in North American libraries over audio-visual materials in the 1960s and 1970s. Then as now, A/V materials were thought to call for special and different cataloguing rules, specially trained librarians, and the transformation of the library into a "resource center." The tumult died as people came to their senses and integrated A/V materials into their collections and cataloguing rules—and we still have the Library of Congress not the Resource Center of Congress.) The strongest support for this notion of exceptionalism comes from the evanescence and mutability of electronic documents. Those characteristics, which any true librarian deplores, are really the logical outcome of the history of human communication—each format produces more documents than its predecessor, and each is less durable than its predecessor. It takes a long time to make many copies of stones bearing carved messages, but those messages can be read millennia later. You can send an e.mail message from Boston to Addis Ababa in a twinkling of an eye, but that message may be expunged in a second twinkling. Many electronic documents are like those minute particles of matter that are only known because scientists can see where they have been during their micro-milliseconds of existence. Let me pose a deep philosophical question—does an e.mail message exist if it is deleted unopened?

There is another important difference between electronic documents and all the types of library material that preceded them. It centers on how electronic resources come to our notice. Let me tell you a short fable. There is an alternative universe in which there are books but no electronic documents. In that universe librarians have no control over the books that they purchase—no selection, no approval plans, and no collection development criteria. All these have been replaced by several trucks pulling up every hour, day and night, to the library's loading dock and depositing heaps of unordered and unwanted books—mostly from unheard-of publishers, vanity presses, and basement self-publishers. Some of those books might be of interest and use, but which are they, how do librarians and library users find them, and what on earth do they do with all the rest? In that alternative universe, librarianship becomes a much more random, disorganized process than anything on earth. The library would send out squads of trained personnel to root through the piles looking for worthwhile items to be catalogued and shelved. But wait! This is an alternative universe and, having selected 100 books from the piles and fully catalogued and organized them, librarians come back the next day to find that 25 of them have vanished and 25 have changed their titles! In the mean time, the piles outside the library are multiplying and shape-shifting and, for every 100 books the library SWAT team rescues, 200 are added by the unending delivery trucks. Small wonder that, in the alternative universe, librarians are careworn and cataloguers neurotic.

If you take that alternative universe and substitute electronic documents for books, you have a taste of what we are trying to deal with in bringing electronic documents under bibliographic control. There are too many of them, some of them vanish after being recorded, some change their attributes, some are inauthentic in that they are not what they purport to be, some cannot be found, and there is no filtering out of the ephemeral and the meretricious (as is done by the book publishing and selling industry). I believe that the idea of "cataloguing the Web" is not only unattainable but also undesirable—most of what is on the Net and the Web does not merit the expense and the time of cataloguing. The questions are, of course, which electronic documents are worth cataloguing and how many of them are there? In order to answer those questions we need an, at least, outline taxonomy of the world of electronic documents. Most statements about electronic communication (laudatory and critical) tend toward generalization and the bandying about of vast numbers rather than being evaluative or descriptive. Whether one believes that the

Internet represents a quantum leap forward for humankind; that the Internet is a vast wasteland; or that it is good in part and worthless in part, surely we can all benefit from understanding the nature of the documents and resources the Internet makes available. In that spirit, I offer the following breakdown of Internet and Web documents. What we are faced with, broadly, is

- Ephemera
- Commercial sites
- Print-derived resources
- Electronic serials (free-standing, i.e., not derived from print)
- Digitized archives (textual, sound, and visual)
- Original creative works (textual, sound, and visual)

Ephemera. Libraries have always ruled out, consciously or unconsciously, vast areas of recorded information. We have not only been selective within formats but also have been very selective when it comes to formats that we do and do not collect. Much of the stuff that we used to ignore now shows up on the Net and the Web. To demonstrate this, just do a search using a search engine on any subject and review the inevitable few thousand "hits" with a view to imagining their tangible analogues. Personal Web pages are the electronic versions of scrapbooks and diaries—of keen interest to their compilers but to few others. Restaurant reviews? Press releases in digital form? Association newsletters? Weather forecasts? Faculty lists of Australian universities? Syllabi? Advertisements? So, on and on it goes—acres of the cyberworld full of ephemera. We have never brought this stuff under bibliographic control—why should we start now?

Commercial sites and pornography. People anxious to sell you something populate much of the electronic frontier. From e.tailers to business-to-business sites to pornographers, they are all pursuing the Capitalist Dream of easy profits. Ironically, there are very few who have realized that dream and the concept of a new, knowledge-based economy now looks somewhat dishevelled. The only uniformly successful commercial enterprises in cyberspace are those of pornographers. Libraries as a whole have never collected commercial information or, with few exceptions, pornography

Print-derived resources. One of the indisputably valuable sectors of the Net is composed of many documents and sites that are derived from the print industry and are dependent on the success of that industry for their very existence. These do not, by and large, present much of a technical bibliographic control problem. We know, in principle, how to catalogue different format manifestations of texts and graphic publications—extending that knowledge into cyberspace is not a massive intellectual challenge. Further, print derived electronic resources are far less transient than their purely electronic counterparts.

Electronic journals. Most electronic journals are, of course, based on the products of a flourishing print industry. There have been many forecasts over the last decade that electronic journals will supplant print, but no one has, as yet, produced an economic model for such a major change and there are, at this time, a microscopic number of commercially viable true electronic journals. The problem is, of course, that the whole concept of a journal (serial assemblages of articles which are paid for in advance—whether they are ever read or not) seems inapplicable to the electronic age. Many problems in adapting to technology are caused by simply automating procedures or resources and not re-thinking the whole issue. Why not, in an age of electronic communication, provide services that deliver desired articles on demand and charge the users only for the articles that are used? In such a world, the "journal" would no longer exist and libraries would be cataloguing at the level of what S.R. Ranganathan called "micro-thought"—a level that we have always left to indexing and abstracting services.

Digitized archives (textual, sound, and visual). One of the most important and valuable achievements of the electronic age is the way in which large archives have been made available to global audiences. Those archives (which are unique by definition) have, hitherto, been accessible only to researchers with the means and time to travel to the location of the archive. To take a well-known example, the Library of Congress's *American Memory Project*[xii] is a vast assemblage of pamphlets and other texts, graphic items, films, sound recordings, maps, etc., that is taking advantage of digitization and the Web to give the world access to the untold riches of the Library's archival collections. Other institutions have created Web archives of coins, stamps, posters, manuscripts, prints and drawings, early films, sound recordings, photographs, and every other conceivable means of communication, including artefacts. There has long been a great divide between library cataloguing and archival cataloguing. The former concentrates on individual manifestations of works and the latter has been largely concerned with creating finding aids for assemblages of documents. In the 20+ years since the appearance of AACR2, there has been some movement on this matter to bring the two cataloguing traditions closer together.[xiii] Although the two will always operate at different levels, there is no reason why their cataloguing practices cannot be harmonized and the results of such harmonization applied to the various parts of the *American Memory Project* and other such digital archives.

Original creative works (textual, sound, and visual). The advent of cyberspace has created a new environment for artists in all older media to extend and develop their art. Film, a new medium of communication 100 years ago, developed into an art form for directors (the French term *auteur* is particularly significant here), cinematographers, and a new breed of actors. Television, that great cultural wasteland, has not been as culturally beneficent as film, but it has given rise to video artists like Nam June Paik. In the same way, there are forecasts of new breeds of creators on the Internet including hypertext writers, digital artists, cyberpoets, and electronic musicians. When such productions belong to the same families as materials collected and catalogued by libraries (as is the case with hypertexts) they will be collected and catalogued. Other artistic productions in cyberspace will be the province of museologists, videographers, and art collectors.

Obviously, we need a more detailed analysis of the materials available on the Net and the Web than I have offered here and, crucially, we need more quantified analysis if we are to delineate the problem accurately and frame a response to it. Just as a beginning, we need to know which areas of cyberspace we are going to chart and catalogue and, by inference, which areas we are going to leave to search engines and the like. These will not be easy studies, but facts are a far better basis for planning than are the techno-boosterism and hand-waving that characterize most discussions of these topics.

If we reach a point at which we have decided which electronic documents and resources we are to bring under bibliographic control, two important questions will still remain. Which standards shall we use? How is the cataloguing to be organized?

The first question brings me to the topic of metadata. The term means "data about data"—a mostly meaningless concept that, taken literally, would embrace library cataloguing, even though metadata has been explicitly conceived as something that lacks most of the important attributes of cataloguing. The idea behind metadata is that there is some Third Way of organizing and giving access to electronic resources that is approximately half way between cataloguing (expensive and effective) and keyword searching (cheap and ineffective). Further, it is alleged that such low level bibliographic data can be supplied by authors, Webmasters, publishers, and others lacking any knowledge of cataloguing.

It is entirely possible, since the original concept of "metadata" did not originate among librarians, that no consideration was given to the use of "traditional" cataloguing, and, even though librarians are now involved in the projects, the idea that electronic resources cannot be catalogued using existing standards may be firmly entrenched. Be that as it may, the fact is that electronic bibliographic entities have the same attributes as other bibliographic entities. It is perfectly possible to catalogue electronic resources in such a way that the resulting records can be fully integrated into library catalogues. There is a recent *ISBD* for electronic resources[xiv] that will form the basis of the revision of Chapter 9 of *AACR2*; electronic resources have titles and creators (authors) that can be used to provide standard access points, they have subjects that can be expressed in classification numbers and subject headings, and all that data can be incorporated into a MARC record. In short, if one of the justifications for the invention of metadata is that it is needed to facilitate access to electronic resources in the absence of cataloguing standards, that justification is simply wrong.

Perhaps the decision has been made, almost without thinking it through. That decision appears to be, since "traditional cataloguing" is too expensive, there must be a compromise—some third way—that will give the benefits of cataloguing without the effort or expense. In the words of the Introduction to the final report of the Nordic Metadata Project[xv]

Many specialists believe that any metadata is better than no metadata at all - we do not need to stick with the *stringent quality requirements and complex formats of library catalogue systems*. Instead, it is possible to live with something simple, which will be easily understandable to publishers, authors and other people involved with the publishing of electronic documents. (*My emphasis.)*

This is one of the few mentions in this long report of the perceived need for, and nature of metadata as an alternative to cataloguing. It is taken for granted that there is something between "stringent quality requirements" and no quality at all, and that there is something between "complex formats" and almost no format at all.

It seems to be generally accepted that The Dublin Core is the most developed application of metadata and is on the verge of being generally accepted. It was developed by OCLC at its headquarters in Dublin, Ohio, and named for that municipality. It consists of 15 labeled descriptive elements. Cursory analysis shows us that each of these elements has its counterparts in the MARC format and that the content of each of them is governed by either codes in MARC fixed-length fields, cataloguing codes/ISBDs, and/or subject headings lists/thesauri. Of course, the Dublin Core and other metadata "standards" provide a framework for holding bibliographic data but no guidance on how to formulate those data. In short, it is a sub-set of MARC and nothing more. No bibliographic database of any significant size could possibly work if filled with Dublin Core records containing random data without vocabulary control and standard presentation. The "literature" on metadata is full of references to the complexity of the MARC format and of cataloguing codes, which is always presented as being a bad thing. It is worth pointing out that that format and those codes are complex because the bibliographic world is complex. Contrary to rumor, cataloguers do not invent rules to deal with situations that will never occur. The idea that this complex world embodied in millions of bibliographic entities can be reduced to data entered by the untrained into 15 categories is simply preposterous.

The Dublin Core is said to have the following positive attributes.[xvi] It:

- is very simple to learn
- has repeatable elements
- has optional elements
- can be extended for more complex applications
- can be embedded invisibly in Web pages
- is recognized by the World Wide Web Consortium

These are all true, but scarcely relevant to the basic concerns about metadata since none speak to the central points of the content of the bibliographic record or of the limited nature of the sub-set that the 15 elements represent.

The literature of metadata reveals a discussion on the future of the idea between proponents of the original simplicity of the concept and the idea that the metadata need to be normalized and subjected to vocabulary control. This discussion boils down to a choice between an inexpensive and ineffective form of cataloguing in which the 15 elements of the Dublin Core are filled with unqualified and uncontrolled free text on the one hand or an expensive and more effective form of cataloguing in which at least some of the elements of the Dublin Core are filled with normalized controlled data decided on the basis of professional examination of the resource. Such human intervention would not, in all probability be as time-consuming and expensive as full cataloguing, but it would certainly go beyond the simplicity and inexpensiveness desired by those who take the Minimalist point of view.

My inclination has been to dismiss the Dublin Core, as an attempt to reinvent the wheel as something other than round, and to advocate the full application of library or archival cataloguing to those electronic resources that we deem worthy of such treatment. It may be, however, that we could have several layers of treatment depending on the value we assign to the various electronic resources. Such a system would be a pyramid, with the apex being that relatively small proportion of electronic resources that will merit full cataloguing according to existing standards. The next level could be that of enriched Dublin Core records with data in applicable fields being subject to vocabulary control. Then there would be those electronic resources with uncontrolled Dublin Core elements. The last layer would the huge number of electronic resources that would be retrievable, if at all, by search engines using free text searching.

My second question was "how is the cataloguing of electronic resources to be organized? It centers on how to proceed in identifying "worthwhile" materials, in creating and maintaining the databases that will result, and in coordinating the national effort. Again, we have choices. They are between, first, a Grand Plan such as the Library of Congress's action plan called "Bibliographic control of Web resources"[xvii]and, second, a grass roots movement in which individual libraries and librarians and groups of libraries choose and catalogue the documents, resources and sites that have been agreed to be worthwhile. Both approaches call for a common understanding of which types of resources are to be catalogued and agreements on the standards to be used. Perhaps the answer lies in national and international agreements that foster and coordinate individual action but do not inhibit it. That approach will be in many ways a reprise of the history of libraries. Individuals and individual libraries built collections, one choice at a time, over many years. It was not until much later that union catalogues and library collectives brought those individual collections into national, and later international, systems. The difference this time is that the benefits of the work of individual libraries and groups can be made available to all contemporaneously. Let a thousand cataloguing projects bloom, and record by record, collection by collection, worthwhile Net resources will be organized and made available in what will ultimately come to be international systems and databases based on internationally agreed standards.

When it comes to the question of bring the Net and the Web into bibliographic control, the elephant in the room is that of preservation of the human record. Supposing we solve all the problems of bibliographic standardization and the organization of a massive international effort, what is the point if the resources identified and catalogued are not preserved? Those with more faith than I look to gigantic electronic archives maintained by governments and private companies that will ensure the indefinite survival of the electronic records of humankind. This idea appears implausible when one looks at the cost of such archives, the dizzying rate of technological change, the need for the archives to be eternal, and the lack of interest outside the library and archive professions in the onward transmission in the onward transmission of the human record. We can, of course, ignore the problem and hope that it all turns out right in the end—after all, that is what we are doing now. Alternatively, we could turn to the only known way of preserving massive numbers of texts and images—print on acid-free paper. If you are inclined to dismiss that suggestion out of hand, I would recommend that you explore the financial costs and the cultural costs of the alternatives and keep an open mind.

In summary, when we get beyond all the pomposity and techno-babble that dominates discourse on our topic, we can see real problems and real issues. What are we going to do about identifying and making accessible the valuable records of humanity that are only available in electronic form? How are we going to deal with the mutability and evanescence of those records? How are we going to preserve those resources and transmit them to posterity? We will only answer these questions if we employ wisdom and insight, understand the lessons of history, and work with the interests of all our users, present and future, in mind.

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[xiv] ISBD(ER): international standard bibliographic description for electronic resources. München: K.G. Saur, 1997.

[xv] http://linnea.helsinki.fi/meta/nmfinal.htm (dated July 1998)

[xvi] http://www.adam.ac.uk/adam/metadata.html (Dated December 1997)

[xvii] http://lcweb.loc.gov/catdir/bibcontrol/draftplan.html

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Global publishing and national heritage: Selection of Internet resources for national bibliographies

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The era of online publications at Die Deutsche Bibliothek was initiated on July 1, 1998 with the dissertation "Examination on the development of early acoustically evocated potentials with cats for utilisation in basic research and clinical applications" (Untersuchungen zur Entwicklung der frühen akustisch evozierten Potentiale (FAEP) bei der Katze für den Einsatz in der Grundlagenforschung und zur klinischen Anwendung" by Petra Keller.

It is the legal mandate of Die Deutsche Bibliothek as central archival library and national bibliographic centre of the Federal Republic of Germany to collect, archive, index bibliographically all German and German-language publications and to provide public and unconfined access to it. Apart from print media, digital publications on physical data carriers have also been collected since some time and are covered by the "Law concerning Die Deutsche Bibliothek".

Online dissertations

For the following reasons, Die Deutsche Bibliothek decided to start with online dissertations whose numbers were beginning to increase, especially in the exact sciences, as its first step towards development of a completely new procedure for collecting, archiving and indexing of online-publications:

- Online dissertations are static online publications, meaning that they are self-contained and completed at their first publication date.
- Online dissertations generally consist of only a single data file.
- Online dissertations are publications free of any restrictions for access and use.

However, before beginning with the collection of these publications on July 1, 1998, many questions had to be addressed:

- Registration procedure: How would the dissertations get to Die Deutsche Bibliothek?
- Metadata: Which metadata should be recorded?
- Format: In which data format the dissertations should be delivered?
- Indexing: Which new elements are required for the descriptive and subject indexing?
- Archiving: How can long-term accessibility to the dissertations be technically realized ?
- Bibliographic indexing: What should the entry in the catalogue and the national bibliography look like?
- Use: How does the user obtain access to the full text?

A work group with members of all departments of Die Deutsche Bibliothek developed a procedure taking all these points under consideration.

For the submission of dissertations in print and microfiche form there exists a long standing procedure between Die Deutsche Bibliothek and the university libraries: It is not the author but the university library which submits the dissertation to Die Deutsche Bibliothek. So the methods for submission of online dissertations had to be settled also with the university library, not with the individual author.

Participating university libraries register their online dissertations electronically at Die Deutsche Bibliothek. Initially a register form only available on the server of Die Deutsche Bibliothek was used. The project "Dissertations online" by the Deutsche Forschungsgemeinschaft jointly with Die Deutsche Bibliothek developed a metadata format for doctoral and postdoctoral theses - METADISS - based on the Dublin Core Metadata Element Set. The format was approved by library systems and by university libraries. The metadata set is compiled by the author of the dissertation and can also be used for registering the dissertation by the university library.

After the registration by the university library, Die Deutsche Bibliothek loads the document from the university server on its archive server DEPOSIT.DDB.DE. From accompanying metadata, a front page is generated automatically containing the most important data and providing access to the document.

The metadata set transmitted by the registration procedure consists of obligatory and facultative data elements.

Obligatory, for example, are:

- Name and location of the submitting institution
- Author, title, language, data concerning the dissertation
- URL of the document, format, number of data sets

Examples of optional elements include:

- Details relating to the author like address, date and location of birth
- Subject headings, abstract, supervisor

The publication must be transmitted in a format preferred by Die Deutsche Bibliothek. Formats currently mostly used are PDF, Postscript and HTML. The complete list of preferred formats is available on the homepage of Die Deutsche Bibliothek.

The formal indexing is effected on the basis of the "Rules for the alphabetic cataloguing of non-book materials, RAK-NBM" in the PICA-ILTIS format, which is the internal database format of Die Deutsche Bibliothek and was extended for electronic off- and online publications. Subject indexing is effected on the basis of the "Rules for the subject catalogue, RSWK" which now includes electronic publications.

Like print and microfiche dissertations, online dissertations are indicated in series H (University Publications) of the German National Bibliography. The bibliographic data contain both the URL of the delivering institution as well as the URL of Die Deutsche Bibliothek archive server.

The online dissertations taken over from the university libraries are saved permanently on the archive server of Die Deutsche Bibliothek DEPOSIT.DDB.DE. This enables access to the dissertation even when the dissertation is no longer available on the server of the university.

Currently, it is possible to search for online dissertations deposited at Die Deutsche Bibliothek via the OPAC in Frankfurt am Main and via the Z39.50 gateway, both accessible on the Internet. In view of the requirement of new elements for online publicationsm, research opportunities have been extended. Departing from the title information, the documents can be recalled directly.

The procedure described here for collecting, archiving, and bibliographic indexing of online dissertations has been applied for almost three years now. During this period, Die Deutsche Bibliothek has acquired nearly 4,000 dissertations.

Publications issued by publishers

Legal deposit for online publications has not been provided for in the "Law concerning Die Deutsche Bibliothek". Die Deutsche Bibliothek does not consider an amendment of the law at this point in time as recommendable, as it first wants to gain secured results with exemplary publishers as far as technological requirements for release, data transmissions, entering into the own system, and so on are concerned. Publishers do not see themselves as being in the position of providing long-term archiving for electronic publications to the required extent; therefore, there is a great interest that Die Deutsche Bibliothek might assume this responsibility centrally.

Some basic aspects have been defined in preliminary stages in accord with publishers, librarians, information specialists, and government representatives, and these were passed by the Publishers' Committee of the German Booksellers' Association (Verlegerausschuss des Börsenvereins des Deutschen Buchhandels) in June 1997:

- Online publications need to be transmitted as a matter of principle through data networks or - upon request - on data carriers.

- Online publications issued in various formats should be submitted in the format preferred by Die Deutsche Bibliothek.

- Whenever publications identical in content are released simultaneously in a physical medium and as online publication, both formats have to be submitted.

- Whenever publications identical in content are simultaneously distributed by different providers, they have to be submitted only once.

- The library has permission to copy the online publication for the purpose of long-term archiving. When doing so, authenticity of the content must be safeguarded.

Die Deutsche Bibliothek jointly with the publishers DuMont (Cologne), K.G. Saur, (Munich), Springer (Heidelberg) and Wiley VCH (Weinheim) has constituted a "Workgroup Electronic Deposit Library", in which also the German Booksellers' Association participated. In this Workgroup the conditions are tested and negotiated under which Die Deutsche Bibliothek could also function as archive for online publications.

The first results were presented to the Publishers' Committee of the German Booksellers' Association in March 2000:

It is assumed that the current law as well as the existing regulations for publications on data carriers can also be applied to online publications, but that the particular features of digital publications will require adjustments. Suitable procedures for submitting, archiving, and making them available need to be created.

Owing to the quantity of online publications facing Die Deutsche Bibliothek, at least three ways of processing come into question:

- Archiving and full bibliographic indexing, respectively indexing on the basis of metadata or purely automated procedures (status "archived")

- Linking to provide access to the publisher's server, indexing and eventual archiving (status "linked")

- Linking and indexing without later archiving (status "served")

In contrast to other national bibliographic guidelines for collection of online publications (which provide for delimitation according to principles of nationality and importance of content of the respective publication), Die Deutsche Bibliothek continues to pursue traditional territorial, objective, and largely value-free collection principles. Subject to legal deposit are all online publications whose originators (copyrights holders) are based in the Federal Republic of Germany and that are made public via communication networks. Not subject to legal deposit are business reports, annual reports, and administration reports, pure public relations works, advertising, and possibly net publications below a determined scale.

For online publications whose copyright holders are based in Austria or in Switzerland, access will be granted internally by contract, but archiving them is not planned. In any case, they will be indexed bibliographically in the German National Bibliography.

In cases where a net publication exists as a parallel edition in print or microform that is identical in content, both formats are collected. In cases where the net publication is matched by an identical electronic format on an electronic data carrier, in general the format on the data carrier will be collected. In cases where the net publication is available in several formats, the format preferred by Die Deutsche Bibliothek must be submitted. Online publications that are equipped by the producer with mechanisms like copy protection, limitation of usability dependent on individually defined system environments, have to be submitted in such a state that allows Die Deutsche Bibliothek to fulfil its mandate of long-term archiving and permanent availability (within a defined framework).

For the timing of the submission, the rules governing deposit in general pertain; that is, deposit within a week after release. Dependent on the case of the three possible ways of processing of online publications at Die Deutsche Bibliothek mentioned above, it is also possible to serve legal deposit temporarily through linking.

As a matter of principle, any net publication should be registered electronically at Die Deutsche Bibliothek. Deposit of the publication should be effected by the publisher ("Push-Procedure") in contrast to procedures for online dissertations ("Pull-procedure"). Given various formats of online publications (static, dynamic, databases) and the practical realisation of the deposit procedure in particular cases, Die Deutsche Bibliothek will also accept cumulated deliveries according to determined deadlines.

Like with online dissertations, a registration procedure is being developed between publishers and Die Deutsche Bibliothek. For this procedure, the metadata format according to the Dublin Core Element Set will also be applied containing the following elements (among others):

- Metadata for identification (URL, DOI, URN)
- Metadata concerning conditions for access as well as usage and acquisition
- Metadata referring to the structure
- Metadata referring to the content
- Technical metadata

Free of charge access to copyright-protected publications that are stored on the archive server of Die Deutsche Bibliothek is only authorised for registered users at multimedia workstations in the reading rooms of the Deutsche Bibliothek (Frankfurt am Main) and the Deutsche Bücherei Leipzig. External access to archive copies on the server of Die Deutsche Bibliothek is only possible for material not covered by copyright.

Die Deutsche Bibliothek is planning to draw up a model contract applicable in general for handling copyright-protected publications by publishers so that individual contracts with every single publisher will become unnecessary.

The ideas and agreements between Die Deutsche Bibliothek and German publishers described above are reflective to a significant extent of recommendations for voluntary deposit of electronic publications at national libraries which were passed at the end of the last year by the Conference of European National Librarians (CENL) and the Federation of European Publishers (FEP).

Last year, Die Deutsche Bibliothek acquired about 320 online periodicals from Springer on its archive server, which will be followed by online monographs soon.

Projects

From the outset, Die Deutsche Bibliothek sought co-operation with national and international committees in participating in numerous projects concerned with electronic publications.

Some of these are described below:

Dissertations online

This project, funded by the Deutsche Forschungsgemeinschaft and its partners the German scientific associations came to conclusion last year. The aim of the project was to create the legal, technical, and organisational basis for the deposit, bibliographic indexing, and access to online dissertations. Die Deutsche Bibliothek was involved in this project.

The following results have been obtained (among others):

- In co-operation with the project META-LIB, a Dublin Core Metadata set – METADISS - was developed and used by the university libraries for the description of online dissertations and their registration at Die Deutsche Bibliothek.
- Questions concerning dissertation procedures, data protection law, and copyright law were clarified between authors, universities, libraries and publishers.
- Formats for archiving, conversion, retrieval, and presentation were recommended, and tools for conversion were developed.
- Archiving of online dissertations on document servers of universities and on the archive server of Die Deutsche Bibliothek was safeguarded.

In the meantime Die Deutsche Bibliothek has established DissOnline, an agency for co-ordination to serve as contact point for scientific institutions, libraries, publishers, and authors. It co-ordinates further developments, handles public relations, and promotes publishing of dissertations in electronic form.

META-LIB (Metadata initiative of German libraries)

Die Deutsche Bibliothek and the Niedersächsische Staatsbibliothek Göttingen are now participating in the second stage of META-LIB, a project funded by the Deutsche Forschungsgemeinschaft. The aim of the project is to develop guidelines for the application of metadata, especially of the Dublin Core Set for the indexing of digital and digitised resources. Die Deutsche Bibliothek has taken over the responsibility for developing and testing the national bibliographic indexing of electronic resources applying Dublin Core Metadata as well as authority files. These are the following (among others):

- An outline of a data model according to the standard for Functional Requirements for Bibliographic Records (FRBR)
- Development of metadata sets. (As mentioned above the set METADISS has been established jointly with the project group Dissertations online. Currently a metadata set is being developed for continuous and completed documents (periodicals and monographs)).

- Preparatory work for a data prototype concerning authority files for electronic resources, based on FRBR and in co-operation with the IFLA work group FRNAR (Functional Requirements and Numbering of Authority Records)

The project started in 1998 and will be completed in 2002.

NEDLIB (Networked European Deposit Library)

Long-term archiving and accessibility of electronic publications were the subject of the European project NEDLIB that was concluded at the end of 2000. Eight national libraries were partners in this project as well as a national archive, two software firms, and three publishers as sponsors. Financial support took place within the framework of the Telematic Programme of the European Commission.

The following results were obtained:

- A model of a deposit system for the long-term archiving of electronic publications
- Guidelines concerning technical standards and solutions, procedures for the practical application
- A freely available software package for the automated collection and archiving of electronic publications
- Results of an experiment concerning emulation as strategy for long-term preservation
- Market forecast for electronic publications

TEL (The European Library)

This project was initiated on February 1, 2001 for a period of 30 months. Project partners are eight European National libraries as well as the Conference of European National Librarians (CENL). The European Union supports the programme within the framework of the Information Society Technology Programme.

The aim of this project is to develop a portal enabling simultaneous searching in the online catalogues of European national libraries as well as allowing access to digital and conventional collections and services. On the basis of the Gabriel platform, the information server of the European national libraries, a virtual European library shall come into existence.

The following results are sought:

- Agreements with the publishers of the respective countries concerning using the possibilities of electronic publications
- Development of a common business model for the use of electronic publications
- Development of a joint portal
- Development and tests of open standards, work methods and procedures to be adopted without any problems by other national libraries

Perspective

Online publications are increasingly going to play a more important role in the years to come. Die Deutsche Bibliothek has undertaken significant efforts in terms of personnel and technology to provide long-term preservation for these publications. Apart from this, the influx of print media continues to increase . The German National Bibliography has indicated around 226,000 publications last year for an increase of 4 % over 1999. For the future, Die Deutsche Bibliothek continues to accept responsibility for archiving and to making accessible all formats of publications despite their varying requirements.

In conclusion, you are invited to visit these Internet addresses:

Homepage Der Deutschen Bibliothek http://www.ddb.de

DissOnline http://www.ddb.de/professionell/dissonline.htm

METALIB http://www.ddb.de/professionell/metalib.htm

NEDLIB http://www.kb.nl/coop/nedlib/

TEL http://www.europeanlibrary.org/

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Simultaneous Interpretation: -

Selektion von Online-Publikationen für Nationalbibliographien

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Mit der Dissertation „Untersuchungen zur Entwicklung der frühen akustisch evozierten Potentiale (FAEP) bei der Katze für den Einsatz in der Grundlagenforschung und zur klinischen Anwendung“ von Petra Keller begann am 1. Juli 1998 in Der Deutschen Bibliothek das Zeitalter der Netzpublikationen.

Die Deutsche Bibliothek hat als zentrale Archivbibliothek und nationalbibliographisches Zentrum der Bundesrepublik Deutschland die gesetzliche Aufgabe, das deutschsprachige Schrifttum umfassend zu sammeln, zu archivieren, bibliographisch zu verzeichnen und öffentlich und uneingeschränkt zugänglich zu machen. Neben Printmedien werden seit längerem auch digitale Publikationen auf physischen Datenträgern gesammelt, deren Sammlung durch das „Gesetz über Die Deutsche Bibliothek“ abgedeckt wird.

Online-Dissertationen

Als ersten Schritt in das völlig neue Verfahren für die Sammlung, Archivierung und Verzeichnung von Online-Publikationen entschloss sich Die Deutsche Bibliothek, aus den folgenden Gründen mit Online-Dissertationen zu beginnen, deren Zahl vor allem in den naturwissenschaftlichen Fachbereichen stark zu steigen begann:

- Online-Dissertationen sind statische Netzpublikationen, d. h. sie sind zum Zeitpunkt ihrer Erstveröffentlichung vollständig und abgeschlossen.
- Online-Dissertationen bestehen in der Regel nur aus einer Datei.
- Online-Dissertationen sind freie Publikationen, die ohne Zugriffsbeschränkung nutzbar sind.

Bis jedoch am 1. Juli 1998 mit der Sammlung dieser Publikationen begonnen werden konnte, waren viele Fragen zu klären:

- Meldeverfahren: Wie kommt die Dissertation zu Der Deutschen Bibliothek?
- Metadaten: Welche Metadaten sollen erfasst werden?
- Dateiformat: In welchem Dateiformat können die Dissertationen abgeliefert werden?
- Erschließung: Welche neuen Felder für die formale und sachliche Erschließung sind erforderlich?
- Archivierung: Wie ist die Langzeitverfügbarkeit technisch zu realisieren?
- Bibliographische Verzeichnung: Wie soll die Anzeige im Katalog und in der Nationalbibliographie aussehen?
- Benutzung: Wie erfolgt der Zugriff auf den Volltext?

Eine Arbeitsgruppe mit Mitgliedern aus allen Fachabteilungen Der Deutschen Bibliothek entwickelte einen Geschäftsgang, der all diese Punkte berücksichtigt.

Für die Ablieferung von Dissertationen in Print- und Mikrofiche-Form gibt es zwischen DDB und den deutschen Universitätsbibliotheken ein seit langem bewährtes Verfahren: Nicht der Autor, sondern die Universitätsbibliothek liefert die Dissertation an Die Deutsche Bibliothek. Somit waren die Ablieferungsmodalitäten auch für Online-Dissertationen nicht mit dem einzelnen Autor, sondern mit der Universitätsbibliothek festzulegen.

Die beteiligten Universitätsbibliotheken melden Online-Dissertationen elektronisch bei Der Deutschen Bibliothek an. Zuerst wurde dafür ein Meldeformular verwendet, dass nur auf dem Server DDB angeboten wird. Mittlerweile wurde gemeinsam mit dem DFG-Projekt „Dissertationen Online" ein auf dem Dublin Core Metadata Element Set basierendes Metadatenformat für Dissertationen und Habilitationen – METADISS – entwickelt. Es ist mit den Bibliotheksverbünden und den Hochschulbibliotheken abgestimmt. Der Metadatensatz wird vom Verfasser der Dissertation erstellt und kann von der Universitätsbibliothek ebenfalls zur Meldung der Dissertation genutzt werden.

Nach der Anmeldung durch die Universitätsbibliothek lädt Die Deutsche Bibliothek das Dokument vom Universitätsserver auf ihren Archivserver DEPOSIT.DDB.DE. Aus den mitgelieferten Metadaten wird automatisch eine sogenannte Frontpage erstellt, die die wichtigsten Daten zur Publikation enthält und den Zugriff auf das Dokument ermöglicht.

Der Metadatensatz, der durch das Meldeverfahren übermittelt wird, enthält obligatorische und freiwillige Datenelemente.

Obligatorisch sind z. B.

- Name und Sitz der abgebenden Stelle
- Autor, Titel, Sprache, Promotionsdaten
- URL des Dokuments, Dokumentformat, Anzahl der Dateien

Freiwillige Elemente sind z. B.

- Angaben zum Verfasser wie Adresse und Geburtsdatum und –ort
- Schlagworte, Abstract, Betreuer/Doktorvater

Die Ablieferung der Publikationen muss in einem der von Der Deutschen Bibliothek bevorzugten Dateiformate erfolgen. Die meist verwendeten Formate sind zzt. PDF, Postscript und HTML. Die vollständige Präferenzliste der Formate ist auf der Homepage Der Deutschen Bibliothek zu finden.

Die formale Erschließung erfolgt auf der Grundlage der „Regeln für die alphabetische Katalogisierung von Nichtbuchmaterialien, RAK-NBM" im PICA-ILTIS-Format, dem internen Datenbankformat Der Deutschen Bibliothek, das für elektronische Off- und Online-Publikationen erweitert wurde. Die inhaltliche Erschließung erfolgt auf der Grundlage der „Regeln für den Schlagwortkatalog, RSWK", die ebenfalls nun elektronische Publikationen stärker berücksichtigt.

Online-Dissertationen werden genau wie Print- und Mikrofiche-Dissertationen in der Reihe H (Hochschulschriften) der Deutschen Nationalbibliographie angezeigt. In den bibliographischen Daten wird die URL der abgebenden Universitätsbibliothek und die URL des Archivservers DDB angegeben.

Die von den Universitätsbibliotheken übernommenen Online-Dissertationen werden auf dem Archivserver Der Deutschen Bibliothek DEPOSIT.DDB.DE dauerhaft gespeichert. Damit ist sichergestellt, dass ein Zugriff auf die Dissertation auch dann noch möglich ist, wenn die Dissertation nicht mehr auf dem Server der Universität zur Verfügung steht.

Die in Der Deutschen Bibliothek vorhandenen Online-Dissertationen sind zzt. über den OPAC in Frankfurt am Main und über das Z39.50-Gateway suchbar, die beide über das Internet zugänglich sind. Die Recherchemöglichkeiten wurden hinsichtlich der für Online-Publikationen notwendigen Elemente erweitert. Von der Titelinformation ausgehend können die Dokumente direkt aufgerufen werden.

Das hier beschriebene Verfahren für die Sammlung, Archivierung und bibliographische Verzeichnung von Online-Dissertationen wird jetzt seit fast 3 Jahren eingesetzt. Mittlerweile sind annähernd 4.000 Dissertationen bei Der Deutschen Bibliothek gespeichert.

Verlagspublikationen

Die Ablieferung von Netzpublikationen ist bisher im „Gesetz über die Deutsche Bibliothek" nicht vorgesehen. Die Deutsche Bibliothek hält auch eine sofortige Gesetzesnovellierung nicht für sinnvoll, sondern möchte zunächst mit einigen beispielhaften Verlagen gesicherte Erkenntnisse hinsichtlich technischer Erfordernisse des Abrufs, der Datenübertragung, der Einspeisung in das eigene System usw. sammeln. Die Verlage sehen sich nicht in der Lage, eine Langzeitarchivierung elektronischer Publikationen im erforderlichen Umfang zu leisten, daher besteht ein großes Interesse daran, dass Die Deutsche Bibliothek diese Aufgabe zentral übernimmt.

Einige grundlegende Aspekte wurden in Absprache mit Verlegern, Bibliothekaren, Informationsspezialisten und Regierungsvertretern im Vorfeld definiert und vom Verlegerausschuss des Börsenvereins des Deutschen Buchhandels im Juni 1997 verabschiedet:

- Netzpublikationen sind grundsätzlich über Datennetze abzuliefern, auf Aufforderung ggf. auf Datenträgern.
- Netzpublikationen in verschiedenen Formaten sind in dem von der Bibliothek gewünschten Format abzuliefern.
- Werden inhaltlich identische Medienwerke gleichzeitig in physischer Form und als Netzpublikation verbreitet, sind beide Formen abzuliefern.
- Werden inhaltlich identische Netzpublikationen von mehreren Anbietern gleichzeitig verbreitet, sind sie nur einmal abzuliefern.

- Der Bibliothek ist gestattet, eine Kopie der digitalen Publikation für Zwecke der Langzeitarchivierung herzustellen. Dabei ist die Authenzität des Inhalts zu sichern.

Die Deutsche Bibliothek hat gemeinsam mit den Verlagen DuMont (Köln), K.G. Saur (München), Springer (Heidelberg) und Wiley-VCH (Weinheim) eine „Arbeitsgruppe Elektronische Depotbibliothek" eingerichtet, an der auch der Börsenverein des Deutschen Buchhandels beteiligt ist. In dieser Arbeitsgruppe werden die Bedingungen getestet und ausgehandelt, unter denen Die Deutsche Bibliothek Archivbibliothek auch für Netzpublikationen sein kann.

Die ersten Arbeitsergebnisse wurden im März 2000 dem Verlegerausschuss des Börsenvereins des Deutschen Buchhandels vorgestellt:

Es wird davon ausgegangen, dass das derzeitige Gesetz sowie die vorhandenen Sammelrichtlinien für Publikationen auf Datenträgern auch für Netzpublikationen angewendet werden sollen, aber Anpassungen an die Besonderheiten der Materialart Netzpublikationen erforderlich sein werden. Dazu müssen angemessene Verfahren für die Ablieferung, Archivierung und Bereitstellung geschaffen werden.

Wegen der Fülle der Netzpublikationen, die auf Die Deutsche Bibliothek zukommt, werden wenigstens drei verschiedene Formen der Behandlung von Netzpublikationen in Frage kommen:

- Archivierung und volle bibliographische Erschließung bzw. Erschließung auf der Basis von Metadaten oder rein maschineller Verfahren (Status „archived")
- Verlinkung, d. h. Zugriff auf den Verlagsserver, Erschließung und spätere Archivierung (Status „linked")
- Verlinkung und Erschließung ohne spätere Archivierung (Status „served")

Im Gegensatz zu anderen nationalbibliothekarischen Richtlinien für die Sammlung von Netzpublikationen, die u. a. eine Abgrenzung nach dem Staatsbürgerschaftsprinzip und nach inhaltlicher Bedeutung der jeweiligen Publikation vorsehen, wird das bisherige territoriale, objektive und weitgehend „wertungsfreie" Sammelprinzip Der Deutschen Bibliothek weiter verfolgt. Ablieferungspflichtig sind alle Netzpublikationen, deren Urheber (Rechteinhaber) einen Sitz in der Bundesrepublik Deutschland haben, und die der Öffentlichkeit über Kommunikationsnetze zugänglich gemacht werden. Nicht ablieferungspflichtig sind z.B. Geschäfts-, Jahres- und Verwaltungsberichte, Mails, reine Öffentlichkeitsarbeit, Werbung und ggf. Netzpublikationen unter einem bestimmten Umfang.

Für deutschsprachige Netzpublikationen, deren Rechteinhaber ihren Sitz in Österreich oder der Schweiz haben, soll Der Deutschen Bibliothek ein interner Zugriff vertraglich ermöglicht werden, eine Archivierung ist aber nicht geplant. Ihre bibliographische Verzeichnung in der Deutschen Nationalbibliographie soll in jedem Fall erfolgen.

Existiert die Netzpublikation als parallele, d. h. inhaltlich identische Ausgabe auch als gedruckte oder Mikroform, so werden beide Ausgaben gesammelt. Gibt es zur Netzpublikation eine identische Ausgabe auf einem elektronischen Datenträger, so wird im Allgemeinen die Ausgabe auf dem Datenträger gesammelt. Ist die Netzpublikation in mehreren Formaten verfügbar, ist das von Der Deutschen Bibliothek bevorzugte Format abzuliefern. Netzpublikationen, die vom Hersteller mit Mechanismen wie Kopierschutz, Einschränkung der Nutzbarkeit auf individuell definierte Systemumgebungen versehen werden, sind in einem Zustand ablieferungspflichtig, der es Der Deutschen Bibliothek erlaubt, ihre Aufgabe der Langzeitarchivierung und der dauerhaften Bereitstellung (in einem festgelegten Rahmen) nachzukommen.

Für den Zeitpunkt der Ablieferung gelten die grundsätzlichen Bestimmungen über die Ablieferungsverfahren, d. h. Ablieferung innerhalb einer Woche nach Veröffentlichung. Entsprechend den eingangs genannten drei möglichen Formen der Behandlung von Netzpublikationen in Der Deutschen Bibliothek kann der Ablieferungspflicht temporär auch durch eine Verlinkung Genüge getan werden.

Grundsätzlich sollte jede Netzpublikation Der Deutschen Bibliothek auf elektronischem Weg gemeldet werden. Die eigentliche Ablieferung der Publikation sollte im Gegensatz zum gegenwärtigen Verfahren bei Online-Dissertationen („Pull-Verfahren") durch den Verlag erfolgen („Push-Verfahren"). Dabei wird Die Deutsche Bibliothek im Hinblick auf die unterschiedlichen Formen von Netzpublikationen (statisch, dynamisch, Datenbanken) und auf die praktische Umsetzung des Ablieferungsverfahrens in festgelegten Fällen auch kumulierte Lieferungen zu bestimmten Stichtagen akzeptieren.

Wie schon bei den Online-Dissertationen wird zwischen den Verlagen und Der Deutschen Bibliothek ein Online-Anmeldeverfahren eingerichtet. Für dieses Verfahren soll ebenfalls das Metadaten-Format nach dem Dublin Core Element verwendet werden, das u.a. folgende Elemente enthalten soll:

- Metadaten zur Identifikation (URL, DOI, URN)
- Metadaten zu Zugangsbedingungen sowie Nutzungs- und Beschaffungskonditionen
- Metadaten zur Struktur
- Metadaten zum Inhalt
- Technische Metadaten

Der kostenlose Zugriff auf urheberrechtlich geschützte Publikationen, die auf dem Archivserver Der Deutschen Bibliothek gespeichert sind, ist nur für registrierte Nutzer an den Multimedia-Arbeitsplätzen in den Lesesälen der Deutschen Bibliothek Frankfurt und der Deutschen Bücherei Leipzig gestattet. Der externe Zugriff auf Archivkopien auf dem Server DDB ist nur bei copyrightfreien Materialien möglich.

Die Deutsche Bibliothek plant, einen Modellvertrag zu entwerfen, der pauschal für den Umgang mit urheberrechtsgeschützten Verlagspublikationen gelten soll, so dass nicht mit jedem einzelnen Verleger individuell Vereinbarungen getroffen werden müssen.

Die hier genannten Vorstellungen und Absprachen zwischen Der Deutschen Bibliothek und den deutschen Verlegern finden sich im wesentlichen Teil wieder in einem Empfehlungspapier über die freiwillige Ablieferung elektronischer Publikationen an Nationalbibliotheken, das Ende des vergangenen Jahres gemeinsam von der Conference of European National Librarians (CENL) und der Federation of European Publisher (FEP) verabschiedet wurde.

Im vergangenen Jahr hat Die Deutsche Bibliothek rund 320 Online-Zeitschriften des Springer-Verlages auf ihren Archivserver übernommen, in nächster Zeit sollen die ersten Online-Monographien folgen.

Projekte

Von Beginn an hat Die Deutsche Bibliothek die Zusammenarbeit mit nationalen und internationalen Gremien gesucht und war oder ist beteiligt an einer Vielzahl von Projekten, die sich mit elektronischen Publikationen befassen.

Einige dieser Projekte sollen hier kurz vorgestellt werden:

Dissertationen online

Partner in diesem von der Deutschen Forschungsgemeinschaft geförderten Projekt, das im vergangenen Jahr abgeschlossen wurde, waren die naturwissenschaftlich orientierten deutschen wissenschaftlichen Fachgesellschaften. Projektziel war, die rechtlichen, technischen und organisatorischen Grundlagen zur Ablieferung, bibliographischen Verzeichnung und Verfügbarkeit von Online-Dissertationen zu schaffen. Die Deutsche Bibliothek war in dieses Projekt einbezogen. Folgende Ergebnisse wurden u.a. erzielt:

- In Zusammenarbeit mit dem Projekt META-LIB wurde ein Dublin-Core-Metadatensatz – METADISS - entwickelt, der von den Universitätsbibliotheken für die Beschreibung von Online-Dissertationen und ihre Meldung an Die Deutsche Bibliothek genutzt wird.

- Promotionsverfahren, Datenschutzrecht und Urheberrechtsfragen wurden zwischen Autoren, Fakultäten, Bibliotheken und Verlagen geklärt.

- Formate zur Archivierung, Konvertierung, Retrieval und Darstellung wurden empfohlen und Konvertierungstools erstellt.

- Die Archivierung von Online-Dissertationen auf Dokumentservern der Universitäten und auf dem Archivserver Der Deutschen Bibliothek wurde sichergestellt.

Mittlerweile hat Die Deutsche Bibliothek die Koordinierungsstelle DissOnline eingerichtet, die als Kontaktstelle für wissenschaftliche Institutionen, Bibliotheken, Verlage und Autoren dienen soll. Sie koordiniert Weiterentwicklungen, betreibt Öffentlichkeitsarbeit und fördert das Publizieren von Dissertationen in elektronischer Form.

META-LIB (Metadaten-Initiative deutscher Bibliotheken)

META-LIB ist ein von der Deutschen Forschungsgemeinschaft gefördertes Projekt, an dem jetzt in der 2. Projektphase die Niedersächsische Staats- und Universitätsbibliothek Göttingen und Die Deutsche Bibliothek beteiligt sind. Ziel des Projekts ist, Richtlinien für den Einsatz von Metadaten, insbesondere des Dublin-Core-Sets, zur Erschließung digitaler und digitalisierter Ressourcen in wissenschaftlichen Bibliotheken zu entwickeln. Die Deutsche Bibliothek hat die Aufgabe übernommen, Konventionen zur nationalbibliographischen Erschließung elektronischer Ressourcen unter Verwendung von Dublin-Core-Metadaten und unter Einbeziehung von Normdaten zu entwickeln und zu erproben. Dies sind u.a.:

- Entwurf eines Datenmodells nach dem Vorbild der Functional Requirements for Bibliographic Records (FRBR)

- Entwicklung von Metadatensets. Wie oben angeführt ist gemeinsam mit der Projektgruppe Dissertationen Online das Set METADISS festgelegt worden. Zzt. wird ein Metadaten-Set für fortlaufende und abgeschlossene Dokumente (Zeitschriften und Monographien) entwickelt.

- Vorarbeiten zu einem Datenmodell zur Nutzung von Normdaten für elektronische Ressourcen auf der Grundlage der FRBR in Zusammenarbeit mit der IFLA-Arbeitsgruppe FRANAR (Functional Requirements and Numbering of Authority Records)

Das Projekt hat 1998 begonnen und soll im Jahr 2002 abgeschlossen sein.

NEDLIB (Networked European Deposit Library)

Gegenstand des europäischen Projektes NEDLIB, das Ende des Jahres 2000 abgeschlossen wurde, war die Langzeitarchivierung und –verfügbarkeit elektronischer Publikationen. Partner in diesem Projekt waren acht Nationalbibliotheken, ein Nationalarchiv, zwei Softwarefirmen sowie drei Verlage als Sponsoren. Die Förderung erfolgte im Rahmen des Telematik-Programmes der Europäischen Kommission.

Folgende Ergebnisse wurden erreicht:

- Modell eines Depotsystems für die Langzeiterhaltung elektronischer Publikationen
- Richtlinien zu technischen Standards und Lösungen, Verfahren zur praktischen Anwendung
- Ein frei verfügbares Softwarepaket zum automatischen Einsammeln und Archivieren von elektronischen Publikationen
- Ergebnisse eines Experiments zur Emulation als Langzeiterhaltungsstrategie
- Prognose zur Marktentwicklung elektronischer Publikationen

TEL (The European Library)

Dieses Projekt hat am 1. Februar 2001 begonnen und ist auf 30 Monate angelegt. Projektpartner sind acht europäische Nationalbibliotheken sowie die Conference of European National Librarians (CENL). Die Europäische Union fördert das Projekt im Rahmen des Information Society Technology Programmes.

Ziel des Projektes TEL ist, ein Portal zu entwickeln, über das mit einer Anfrage gleichzeitig in allen Online-Katalogen der europäischen Nationalbibliotheken gesucht und davon ausgehend auf deren digitale und konventionelle Bestände und Dienste zugegriffen werden kann. Basierend auf der Plattform von Gabriel, dem Informationsserver der europäischen Nationalbibliotheken, soll eine virtuelle europäische Bibliothek entstehen.

Folgende Ergebnisse sollen erzielt werden:

- Einigung mit den jeweiligen Verlegern eines Landes über einheitliche Nutzungsmöglichkeiten der elektronischen Publikationen
- Entwicklung eines gemeinsamen Geschäftsmodells für die Nutzung elektronischer Publikationen
- Entwicklung eines gemeinsamen Portals
- Entwicklung und Test offener Standards, Arbeitsmethoden und Verfahren, die ohne Probleme auch von anderen interessierten Nationalbibliotheken übernommen werden können.

Ausblick

Netzpublikationen werden in den kommenden Jahren eine immer wichtigere Rolle spielen. Die Deutsche Bibliothek hat grosse personelle und technische Anstrengungen unternommen, um auch für diese Veröffentlichungen die Langzeiterhaltung sicherzustellen. Daneben steigt der Zugang der Printmedien nach wie vor an. In der deutschen Nationalbibliographie wurden im vergangenen Jahr rund 226.000 Veröffentlichungen angezeigt, das sind ca. 4 Prozent mehr als 1999. Die Deutsche Bibliothek sieht es als ihre Aufgabe, auch in Zukunft, alle Publikationsformen mit ihren unterschiedlichen Anforderungen langfristig zu archivieren und öffentlich zugänglich zu machen.

Zum Abschluss einige Internetadressen, unter denen weitere Informationen zu finden sind:

Homepage Der Deutschen Bibliothek http://www.ddb.de
DissOnline http://www.ddb.de/professionell/dissonline.htm
METALIB http://www.ddb.de/professionell/metalib.htm
NEDLIB http://www.kb.nl/coop/nedlib/
TEL http://www.europeanlibrary.org/

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The New Books Project: a prototype for re-inventing the Cataloguing-in-Publication program to meet the needs for publishers, libraries and readers in the 21st century

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The New Books project is a Library of Congress Cataloging Directorate proposal intended to provide the library community and general public access to a rich source of information about soon-to-be-published and just-published books. In conjunction with another Cataloging Directorate proposal, known as the Library of Congress Partnership Program, New Books would enable readers to identify forthcoming books in the Library of Congress database and then readily request books of interest be purchased by their local library.

The New Books program would build on the Library of Congress Cataloging in Publication program (also known as "CIP"). CIP began in 1971. Its aim was simple: to help libraries by reducing the cost of cataloging and by expediting book processing so books would get into the hands of readers more quickly. Participating publishers submit an application form and a galley (or manuscript) of each forthcoming book for which CIP cataloging (also known as CIP data) is requested. Upon receipt the work is fully cataloged. This includes descriptive cataloging, name authority work, subject analysis, LC number classification, and decimal number classification. The bibliographic record is then sent to the publisher who prints the record on the verso of the title page so that it is immediately available to any library that purchases the book .

In recent years, an electronic version of the CIP program (known as Electronic CIP or ECIP) was developed to enable publishers to apply for CIP data via the Internet. In this instance, the publisher completes an online form and then transmits the complete text of the work to the Library of Congress. After cataloging is complete the CIP data is emailed to the publisher.

ECIP set the stage for New Books. New Books would use the same technology as ECIP. With New Books the publisher would complete an online data application and transmits the full text to the Library of Congress just like ECIP. But with New Books the publisher would submit additional data elements. These would include: an image of the book jacket, book jacket blurb, a summary, sample text, table of contents, information about the author, the author's email address, the publishers' homepage, and the homepage where the book can be purchased. Upon receipt by the Library of Congress, computer programs would automatically extract various data elements and construct a New Books record.

The New Books record is the keystone of the New books program. This is not a catalog record but, as noted, a record generated automatically by computer programs. A New Books record (as currently defined) includes the author, title, place of publication, proposed date of publication, and ISBN as well as an image of the book jacket, a summary, sample text, table of contents, information about the author, the author's email address, the publishers' homepage, and the homepage where the book can be purchased. The New Books record would be posted on the Library of Congress homepage where it could be accessed by any reader worldwide with access to the Internet.

Simultaneous to the New Books record creation process, Library of Congress staff would appraise the title for processing via the CIP program or the Preassigned Control Number program. Consequently, the publisher would be sent either a Library of Congress control number or CIP data for each title submitted to the New Books program.

When posted on the Library of Congress homepage, the New Books record would also include a link to the user's local library, assuming the local library participates in the Library of Congress Partnership Program. This latter program is conceived as a cooperative effort between the Library of Congress and participating libraries to enhance service to local library users. Libraries that participate in the program would receive requests from their users for forthcoming books which their users have identified in the Library of Congress New Books data base. Depending on how this program is developed, the user may connect directly to the local library and submit his/her request directly using the local library's server or an email message could be generated and transmitted to the local library. The Library of Congress server could conceivably also support other local library activities related to the New Books program.

A third proposed element, related to the New Books project, is the New Books Alert Service. The intent of the New Books Alert Service is to support the collection development and book acquisition activities of Library of Congress staff by providing New Books records for forthcoming titles which fit the profile of the individual staff member's area of responsibility. The New Books Alert Service would provide Library of Congress staff with an online application form that would enable staff members to identify types of books relevant to their area of expertise. The staff members could do this by identifying subject areas, publishers, formats, genres, etc. of interest. New Books records for titles matching the profile could then be sent directly to the staff members' accounts to be accessed and reviewed at their convenience.

The information elements displayed for Library of Congress staff would include the full range of information elements necessary to enable the staff member to make acquisition, custodial, and processing decision prior to the books receipt and record these decision in the catalog record and related files. This means that when the book is received by the Library of Congress, technicians who first search the book would know at the outset of the work-stream whether or not the Library will add the book to its collections, the number of copies it will add, the unit(s) that will have custody of the work, as well as other decisions related to the books processing and disposition. The staff will also be positioned to acquire additional copies, if needed, or to alert technicians and catalogers of special processing or security needs.

A model of the various modules of the New Books project has been developed and can be accessed as noted below.

> The publisher's module. This module would be used by publishers to request New Books processing for individual titles. To visit this module see: <http://lcweb2.loc.gov:8081/ecip/celli/nbpub.html>.
>
> The public access module. Anyone with access to the Internet could visit the Library of Congress homepage and access this module. This would enable the user to search the database of New Books records and, assuming his/her local library participated in the Library of Congress Partnership Program, request a given book be purchased by his/her local library. To visit this module see: < http://lcweb2.loc.gov:8081/ecip/celli/lchp.html>.
>
> The Library of Congress Partnership Program. Local libraries would use this module to join the Partnership Program and conceivably use it to help process requests made by their readers. To visit this module see:< http://lcweb2.loc.gov:8081/ecip/celli/lcpp.html>.
>
> The New Books Alert Service. This module would be used by Library of Congress staff to assist them in performing collection development and book acquisition activities. To visit this module see:<http://lcweb2.loc.gov:8081/ecip/celli/alrt_so.html>.

Please note that these are only models. They do not constitute a production system. The models were developed to enable staff, stakeholders, and developers to experience sample screens to better conceptualize how New Books might be built. No doubt substantial changes will be made as the system is developed to meet the needs of all of the stakeholders. Also note that comments are included on many of the screens. The comments are intended to explain aspects of the model and would not, of course, be part of a production system.

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The Canadian National Bibliography: 50 years of continuity and change

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It is a pleasure for me to be here today to share with you the celebration of the 50th anniversary of *Canadiana*, Canada's national bibliography. I speak on behalf of all of my colleagues at the National Library of Canada in saying we are proud of our bibliographic heritage and it is an honour for me to be the person having this opportunity to tell you about the creation and evolution of our national bibliography and some of our hopes for its future.

The theme of our session today asks a question: Is bibliography indispensable or redundant? Certainly, in the early days of Canada's history, there was no question as to the need for bibliographic services. Our first prime minister, Sir John A. Macdonald, identified the need for a national library not long after the country was created in 1867. Throughout the decades of the first half of the 20th century, librarians and researchers repeatedly lobbied the Government of Canada to provide two essential services: bibliographic control of Canadian publications and identification and location of these resources for loan. Given the other more pressing priorities in the years immediately following the second world war, it is a tribute to the government of the day that it approved the creation in 1950 of the Canadian Bibliographic Centre to compile and publish a national bibliography and to create and maintain a national union catalogue.

Dr. Jean Lunn, the first editor of Canada's national bibliography, once described the accomplishments of the team assembled to start the Centre as "the work of well intentioned amateurs". "Well intentioned," yes. Stories abound of Jean Lunn and her colleagues pitching in and doing whatever needed to be done to get each issue out in time -- "team work" before the adage existed. "Amateurs", however, they were not. Even a cursory glance at the first issues of

Canadiana shows it to be the enterprise of visionary professionals in terms of coverage, currency and standards.

From the beginning, the scope of Canada's national bibliography was seen as being broader than a register of national imprints. The new bibliography's subtitle, *A List of publications of Canadian interest*, opened coverage to include works about Canada and foreign-published items written by Canadians in addition to titles published in Canada. Anticipating the need for bibliographic control of non-trade publications, the first issue of *Canadiana* includes listings of both federal and provincial government publications and hard-to-find titles issued by associations, societies, councils and similar bodies, often for limited distribution. This initial striving for comprehensiveness in Canadiana has remained constant over *Canadiana*'s history.

Anyone anywhere in the world who's ever worked on producing a national bibliography knows full well the challenges of being as up-to-date as possible. The "well intentioned amateurs" were no slouches when it came to the currency of *Canadiana*'s entries. The first issue contains a good number of 1951 imprints – an impressive accomplishment given the year was only a few weeks old when the first issue of the new national bibliography was sent to the printer. Detailed notes in the catalogue entries reveal the Centre's staff managed to get many of the titles hot off the press – for example, the abstract of papers presented at the inaugural meeting of Canadian Association of Microbiologists (June 7 and 8, 1951) was listed just three weeks later in the July 1st issue and the first issue of the *Weekend Picture Magazine* (September 8, 1951) appeared within days in the September 15th issue of *Canadiana*.

If subscription statistics are any measure, they point to the indispensable nature of this national bibliography -- the world seems to have been ready and waiting for the fledgling *Canadiana*. In May of 1951, just a couple of months after the first issue was released, 420 Canadian libraries and 52 libraries in the United States were on the mailing list. The distribution figures are impressive and worth noting at this year's IFLA conference where the theme is "Libraries and Librarians: Making a difference in the Knowledge Age". It's perhaps a stretch to include the early 1950s as part of the Knowledge Age but there is no question that Jean Lunn and her colleagues did make a difference. The compilation and publication of the national bibliography was the first activity that enabled the newly created Canadian Bibliographic Centre to be of direct assistance to libraries across Canada and to those external to our borders.

A good sense of the remarkable growth of *Canadiana* can be had by comparing its first and last annual printed format cumulations. When the first annual cumulation of the bibliography made its appearance in 1953, it was delivered as one volume containing 269 pages of bibliographic entries and 40 pages of indexing. The 1987 cumulation, in contrast, was published in nine volumes containing close to 2600 pages of bibliographic entries and 6260 pages of author, title, series, subject and ISBN/ISSN indexes.

Our founding mothers set the bar at a pretty high level for the generations of National Library bibliographers who were to follow. How did we measure up? We had an opportunity to assess our progress a few years ago at the time of the International Conference on National Bibliographic Services (ICNBS) held in Copenhagen in November 1998. Representatives from over 70 countries met to discuss and debate issues related to the content and distribution of national bibliographies. The objective of the conference was to review, affirm and, if necessary, update the recommendations of the International Congress on National Bibliographies held in Paris in 1977. The need for the Copenhagen meeting was prompted by changes in the bibliographic landscape brought about in the 1990s by the appearance of electronic publications and the impact of new communication technologies on the distribution of bibliographic data.

The 23 final recommendations of the International Conference on National Bibliographic Services are grouped under a number of broad headings: coverage, presentation and timeliness of the national bibliography, legal deposit, the use of international standards.

The Conference recommended that states examine deposit legislation and consider its provisions in relation to present and future requirements. Where necessary, existing legislation should be revised. I'm pleased to say the National Library of Canada has had an ongoing commitment to fulfilling this requirement. Since its creation in 1953, the National Library Act has been revised a number of times, each expanding the scope of what is collected under legal deposit and subsequently listed in the national bibliography. The original legislation, which applied primarily to books, was extended to include serial publications in 1965, sound recordings in 1969, multi-media kits in 1978, microforms in 1988, CD-ROMs and video-recordings in 1993, and electronic publications on all types of physical formats in 1995. NLC staff members are currently working on revisions to both the Act and the Book Deposit Regulations to accommodate the legal deposit of Internet publications. We are, at the same time, addressing the issue of wording that is broad enough to encompass present and future formats by revising the definition of "book" as used in the Act and the Regulations.

Another ICNBS recommendation states legal deposit legislation should consider the possibility of sharing responsibility for deposit among more than one national institution. This possibility is being proposed in the revision process just mentioned; if implemented, the clause will give Canada's National Librarian the authority to designate "national collection" status on other institutions. Indeed, we've already initiated exploratory action on this front with such institutions as the National Archives of Canada and the Canadian National Institute for the Blind. To some extent, a designated national collection is simply the logical extension of what we've been doing for years – the Library's collaboration with the National Archives, the National Film Board and the Cinémathèque québécoise to compile and publish *Film-Video Canadiana* comes quickly to mind.

The ICNBS conference dealt at length with the need for international standards in bibliographic work and this is certainly one area where the National Library of Canada has long played an active role and continues to demonstrate its support. Canadiana's first editor played an active role in the 1950 UNESCO Conference on the Improvement of Bibliographic Services. Dr. Lunn later participated in the development of the 1967 edition of the Anglo-American Cataloguing Rules as a member of the Canadian Library Association Special Committee on Revision of the A.L.A. Catalog code and, at the time of her retirement in 1975, chaired the Canadian Committee on Cataloguing that was engaged in revising the rules. Present staff members continue the National Library of Canada's work in this area. NLC is a member of the Joint Steering Committee for the revision of AACR; we co-developed MARC 21 with the Library of Congress; we're a corresponding member of the Permanent UNIMARC Committee; we participate in the work of ISO 46 and hold the secretariat of SC 9. An important recent activity has been the harmonization of ISSN rules, ASCR and ISBD(S) under the leadership of the ISBD(S) Working Group chair. I think Dr. Lunn and her colleagues would be proud of what present day staff members are doing to follow up on their pioneering work.

There's nothing like a recitation of library acronyms to cause eyes to glaze over, even in a gathering such as this. Let me wrap up then by concluding with summary comments on *Canadiana*'s accomplishments and a few remarks on the challenges we face at this stage of our development.

Canada's national bibliography made an impressive debut fifty years ago: its coverage was extensive, its currency was remarkable. *Canadiana* has undergone many changes in its relatively short lifetime. It first flourished as a paper product. A microfiche edition later augmented access to entries by a complex series of indexes which served as key to the registry of records. The suite of services offered also extended to include the distribution of machine-readable records as the National Library and the library community it serves automated bibliographic processing in the 1970s. The scope of the bibliography's coverage continued to expand as changes in the country's legal deposit legislation brought publications in many new formats into the National Library. The extent of the detail in the bibliographic entries has expanded and compressed over the years, often in direct relation to increases or cuts in the Library's salary budget and the size of workload to process. *Canadiana*'s editors have endeavoured to expand bibliographic control to the nation's published heritage of all formats by integrating the expertise of partner organizations with the resources of the National Library, by ensuring parallel bibliographical control activities and/or by merging results into one database or product. Recent examples of this cooperative approach include the development of the AMICUS database and the *Canadiana* CD-ROM.

Canadiana has become the flagship publication of Canadian bibliography but it does not go unchallenged in the "indispensable or redundant" debate under consideration today. A recent redesign of the National Library Web site resulted in the removal of any reference to the national bibliography on the home page. The reason given? No place for "dense lists" on a site attempting to appeal to youth and the general public.

Ever the optimist, I am not put off by this development. *Canadiana* has flourished over the years because its editors have been flexible, ready to adapt as appropriate to set backs and/or new opportunities. The basics of our national bibliography have remained constant over the years. As a record of the country's publishing output, *Canadiana* attempts to be comprehensive. As a selection, cataloguing and reference tool for librarians and the book trade, it strives to ensure currency and offer many access points. As the National Library's contribution to the national and international sharing of bibliographic data, it has a long-standing commitment to developing and promoting the use of standards. What has changed is, for the most part, simply the means of disseminating bibliographic data and the format of presenting the data. The paper, microfiche and tape services of our early and middle years have been largely replaced by online access, CD-ROMs and FTP transmission.

Please note, I say "largely" because one of our hottest products these days is *Forthcoming Books*, a listing of titles processed through the Canadian CIP (Cataloguing in Publication) program. In many ways, this seemingly retrograde product is an odd thing to bring up when talking about the challenges of the electronic era. It's printed on the cheapest form of paper available, it is not indexed and it doesn't cumulate. But let me assure you, if there's a delay in the production of any given month's issue, we hear from our users. Why? Because *Forthcoming Books* gets authoritative data about new publications to potential users quickly – in short, it does what a national bibliographic agency is supposed to do. Each month, it reaffirms itself as being indispensable to its users.

The "dense list" criticism is basically a perception issue and I suspect the critics will change their opinion when they see the changes that are being introduced over the next few months, changes that align our traditional bibliographic work more closely with what online booksellers are doing to promote new books. We will continue meeting our users' bibliographic needs as long as we are prepared to reinvent ourselves, discarding or otherwise changing what is not important and building on known strengths. *Forthcoming Books* and the *Canadiana* CD-ROM will undoubtedly be replaced before long by other means of getting Canadian cataloguing data to the people who need the information.

I am confident in the future of Canada's national bibliography and I hope you will invite me back again when we celebrate *Canadiana*'s centennial.

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The Association of Research Libraries Statistics and Measurement Program: From Descriptive Data to Performance Measures

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Abstract:

The Association of Research Libraries (ARL) has collected descriptive data from its members for the better part of the 20th century. As the libraries' environments change to one of increased interest in accountability and institutional outcomes, an ARL New Measures Initiative has been established to develop different and innovative ways for libraries to describe their contributions to their institutions. These new measures will assist libraries to move away from data that just describe a library's inputs and outputs to data and programs that can help libraries measure their performance over time both to benchmark with peers and to improve their own operations.

Introduction

The Association of Research Libraries (ARL) is a not-for-profit membership organization comprising the leading research libraries in the United States and Canada. Its mission is to shape and influence forces affecting the future of research libraries in the process of scholarly communication. Although ARL libraries are a relatively small subset of the research libraries in the United States and Canada, they account for a large portion of academic library resources in terms of assets, budgets, and the number of users they serve. Statistics have been a part of ARL's programs since the association began, and have had a significant impact on the development and use of library statistics in the United States and Canada throughout the 20th century.

Development of ARL Descriptive Statistics

Since 1961-62, ARL has collected data annually from and published statistical data for its members that describe their collections, expenditures, and staffing. Prior to 1961-62, annual statistics for university libraries were collected by James Gerould, who was first at the University of Minnesota and later at Princeton University.[i] These data, covering the years 1907-08 through 1961-62, are now called the Gerould statistics.[ii] The whole data series from 1908 to the present represents the oldest and most comprehensive continuing library statistical series in North America. Machine readable datafiles dating from 1908 are available on the ARL ftp server[iii] and an interactive interface has been developed and is supported by the staff at the Geospatial and Statistical Data Center at the University of Virginia.[iv]

The ARL descriptive measures dataset has remained relatively unchanged throughout the years. The data variables used in the 1960s to the 1980s, with only minor modifications and additions, were those first established by Gerould. Over the past decade, the set of data gathered was expanded to include more categories for public service activities in addition to the traditional categories of library characteristics, collections, personnel, expenditures, and university data. Except for a few services, the library variables still concern the inputs of on-site collections, staff, and expenditures.[v]

ARL statistics data have been most useful at the aggregate, national level for the trend information they provide about changes in services (interlibrary borrowing, group presentations, circulation, reference transactions) in the last 10 years[vi] and monograph and serial unit costs; monograph and serial expenditures, and monograph and serials purchased since 1986.[vii] These data and their accompanying charts are used by the Association and its members to document the decline in ownership due to the high cost of materials. The value of reliable trend data can not be overstated.

However valuable the ARL data were for describing the traditional characteristics of research libraries and to monitor trends, they have not been adequate to assess the emerging uses of technology for access to information and the changing nature of research libraries. This is not to say that ARL had not been looking at other types of data or considering other possibilities for assessing library performance. As early as 1982, ARL contracted with Paul Kantor of Rutgers University to test four performance measures (availability of library materials, accessibility of library materials, analysis of patron activity, and delay analysis of interlibrary loan) and to produce a manual[viii] to help libraries collect and analyze the data. The project achieved its goals of identifying the measures, but the members determined that the process for data collection was too burdensome for regular use.

Also in 1982, ARL began to collect data in a supplementary statistics form that gave members a chance to test collection of specific data such as monographs purchased, staffing, monograph expenditures, staff salaries and fringe benefits, automation expenditures, external and reserve circulation, reference transactions, branch libraries, and instructional faculty. If variables were deemed useful, they were moved into the main ARL statistical survey.

An emphasis in the need to collect measures on access arose from the Committee on ARL Statistics in 1989. In the early 1990s, an "Inventory of Library Access Characteristics" that covered library facilities, equipment, resource-sharing, and some access services was developed and conducted annually for several years. In an article for ARL's newsletter, Sarah Pritchard outlined some of the efforts ARL had been undergoing to integrate measures of outputs and services and noted that a distinction between access measures, which were reflected by library services and could be collected at a national level, and performance measures, which spoke to the effective management and were better addressed locally, was deemed essential.[ix]

ARL Statistics and Measurement Program

In 1994, the Association adopted a new strategic objective that broadened the emphasis of the Statistics Program from just describing research libraries to one of "measuring the performance of research libraries and their contributions to teaching, research, scholarship and community service." In conjunction with this objective, the membership supported an increase in dues allocation to the program and hired a full-time program officer. Since that time, the activities of the program expanded considerably.

The current ARL Statistics and Measurement Program,[x] under the direction of the Statistics and Measurement Committee, provides descriptive data about the characteristics of research libraries today and seeks to develop and measure these libraries' contributions. It has been instrumental in addressing the new ARL strategic goal of developing new measures for assessing library performance and their contribution to higher education. Reports and updates on activities are found in the annual *ARL Program Plan*[xi] ARL's bimonthly report.[xii]

The program supports the production of publications and member-distributed reports regarding the operations of research libraries.[xiii] In addition to the printed publishing efforts, the program has a strong presence in electronic publishing activities. Except for salary data, all data for the annual statistical publications are collected through a website interface to speed the data entry process and ensure accuracy.

The ARL statistical survey instruments, through either use of data variables and definitions or in its entirety, has been used as the basis for surveys conducted by several other organizations: American Library Association (ALA) salary survey, Integrated Postsecondary Education Data System (IPEDS) Academic Library Survey; Association of College and Research Libraries (ACRL), a division of the American Library Association; Council on East Asian Libraries (CEAL); and the Canadian Association of Research Libraries (CARL).

The New Measures Initiative

The ARL New Measures Initiative was begun because of increasing demand for libraries to demonstrate outcomes and impacts in areas of importance to their institution and increasing pressure to maximize use of resources through benchmarking resulting in either cost savings or reallocation. Members felt that ARL was quite good at gathering data on inputs such as collection size, expenditures, and staffing and had made progress in the area of outputs through data on services and people served. And while some effort had been made to look at performance measures in the case of ratios (e.g., expenditures per FTE), a set of measures to determine outcomes or impacts had not yet been developed.

In January 1999, several members of the Statistics and Measurement committee, the ARL Leadership and Management Committee, and other interested member leaders of ARL, gathered in a retreat setting to discuss what ARL can do to assist members in developing new measures that better describe research libraries and their services. Those attending the retreat addressed a set of questions regarding the data needed to describe research libraries in today's environment, the need for new measures, and the means by which useful data and measurement tools could be developed.[xiv] The retreat participants recognized that any new measures must:

- Be consistent with organizational missions, goals and objectives
- Be integrated with an institution's program review
- Balance customer, stakeholder, and employee interests and needs
- Establish accountability
- Include the collection and use of reliable and valid dataThey determined that in order to succeed there must be collaboration among member leaders with strong interest in this area, specific projects developed with different models for exploration, and an intent to make resulting tools and methodologies available to full membership and wider community. Therefore, not all members are required to participate in all projects. This gives each project the flexibility it needs to test and refine measures without placing undue burdens on the entire ARL membership.

When the New Measures Initiative first began, members examined the eight areas of interest generated at the 1999 retreat and subsequently focused attention on several specific topics: higher education outcomes assessment, the utility of service effectiveness measures across libraries, usage measures for electronic resources, identification of cost drivers, and applying the results of the ILL/DD Performance Measures cost study.[xv]

A series of specific projects were initiated in 2000, some supported with direct member financial contributions. The projects can be categorized as:

- Demonstration project for service effectiveness measures
- Investigation of the role libraries can play in campus learning outcomes activities
- Project to define usage measures for electronic information resources

- Identification of cost-drivers and development of cost-benefit studies
- Develop assisted self-study program to apply results of ILL/DD studies
- Investigation of role libraries play in support of the research process

This set of projects has now become the New Measures Initiative and incorporates initial investigations with a variety of projects at different stages of development. Two of the projects are large-scale. To keep the community informed about the initiative and the projects as they progress, a new measures website was established and organized by project.[xvi]

LibQUAL+

The largest of the New Measures Initiatives to date is LibQUAL+[xvii], a research and development project undertaken by ARL in collaboration with Texas A&M University to define and measure library service quality across institutions and to create useful quality-assessment tools for local planning, such as the evaluation of a library's collections-related services from the user's point of view. LibQUAL+ was begun in 1999 in response to members' desire for alternative assessment methods. The project was spearheaded by Texas A&M University Libraries, who had been using a modified version of the SERVQUAL instrument--a customer survey used widely in the private sector--to evaluate their library services since the early 1990s. In the fall of 2000, ARL was awarded a US$498,368 grant from the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE) to help defray the cost of further developing the LibQUAL+ tool and scaling up its application to the full spectrum of libraries in the higher education community. The goals of the project include (a) the development of a regrounded protocol to evaluate service quality in all post-secondary libraries; (b) an effective web-based delivery mechanism for the protocol; (c) identification of best practices to allow wiser allocation of scarce resources through cross-institutional comparison; and (d) the establishment of an ongoing, cost-recovery, service quality assessment program at ARL. Receipt of the grant has allowed ARL to expand the project to libraries outside the ARL membership.

As the LibQUAL+ dataset becomes richer, those libraries who participate in the survey and have users who rate services below minimum expectations can look to their cohorts who excel for models for improvement.

E-Metrics

First known as the e-Usage (Usage Measures for Electronic Resources) project, the ARL E-metrics project is an effort to explore the feasibility of collecting data on the usage of electronic resources. Twenty-four ARL member libraries committed US$10,000 to participate in a 20-month project to be carried out under contract with the Information Use Management and Policy Institute, School of Information Studies at Florida State University.

Project goals are to (a) develop, test, and refine selected statistics and performance measures to describe electronic services and resources in ARL libraries; (b) engage in a collaborative effort with selected database vendors to establish an ongoing means to produce selected descriptive statistics on database use, users, and services; and (c) develop a proposal for external funding to maintain the development and refinement of networked statistics and performance measures.[xviii]

First completed was a knowledge inventory of ARL libraries with indications of institutions worth considering for best practices. Participating institutions subsequently worked with the project investigators to refine a set of measures – unfortunately not as small a list as many had hoped – to field test in spring 2001 for which to develop tools and a methodology for data collection. Since many electronic measures are dependent on vendor data, a meeting with 12 database vendors (ones with which ARL libraries spend the most money) was held in March 2001. The vendors also agreed to a field test of their data in collaboration with some of the participating libraries. The project investigators would review the data to see if a small set can be defined that are in line with library interests and can be generated by the vendors with some consistency. The investigators, project directors, and ARL staff have been engaged in discussions with other national and international organizations struggling with the same issues of electronic resource statistics, in particular vendor-based statistics, and a means for collaborating with those organizations while not detracting from or slowing down the ARL effort.

Project investigators have also begun to consider development of an institutional outcomes model that can be applied to research libraries. Project participants will be responding to draft papers that outline either multiple models or possibly a process by which institutions develop their own outcomes in relation to institutional outcomes.

Other Projects

While the two projects are by far the largest, there are other projects that address the desire for ARL members to have new measures or new ways to measure their operations. To advance an investigation of the role libraries could play in addressing learning outcomes, Kenneth Smith, Eller Distinguished Service Professor of Economics at the University of Arizona was hired as a consultant to draft a white paper suggesting a role for research libraries. His white paper, "New Roles and Responsibilities for the University Library: Advancing Student Learning Through Outcomes Assessment"[xix] outlines a strategy for involving research libraries in campus assessment activities to demonstrate the value of the library to the learning community. The paper was presented to the ARL membership at their May 2000 meeting and an action plan was developed and approved by the Statistics Committee to begin with a call for participants in summer 2001.

Doug Jones, University of Arizona, is serving as a Visiting Program Officer in 2001 to explore the impact libraries have on research and the research process. He will provide a report on his findings to the Statistics and Measurement Committee. If the results suggest future action, a project plan will be developed.

Another project is the development of an assisted self-study for ILL/DD operations. It will consist of three parts: an organizational assessment, comparison of local activity against the benchmarks and best practices identified in the ILL/DD Performance Measures Study, and development of specific actions and changes that will result in a service that meets or exceeds those benchmarks. A small pilot group of libraries will test the methodology, with a goal of making the study available to the membership and library community in 2001.

Cost drivers continue to be of interest to some participating in the New Measures Initiative. Strategies to begin those projects include the development and review of a list of library functions to identify promising areas, clearly define processes that are a part of the function to investigate, develop common definition of tasks, conduct data gathering and analysis, and provide workshops and training on assessment methods.

The first costs project is a technical services cost study methodology that is currently being tested at five research libraries.[xx] When the testing is complete and the software becomes generally available, the ARL Statistics and Measurement Committee will examine its use and consider it for possible recommendation to the ARL community.

Eileen Hitchingham (Virginia Polytechnic and State University) developed a methodology to allocate staff costs to library services. Several libraries are testing the methodology in summer 2001 and, if successful and scalable, the methodology may subsequently be offered by ARL at a cost-recovery rate for members.

The shift from an input to an outcomes focus requires a change in thinking for many individuals. In order to assist ARL member libraries to make this shift, the ARL Statistics and Measurement Program conducts a variety of workshops, sponsors conferences, and provides consulting services.

Conclusion

As the research libraries continue to feel the pressures of shifting from a management system that is accustomed to measures of inputs (revenues) and outputs (expenditures) to one of efficiency and effectiveness, it will be important that the New Measures Initiative keep looking for innovative ways to describe the research libraries of today and their contributions to their organizations. Whether some or all of the ARL members choose to participate in some or all of the projects is not as important as offering the opportunity to test and refine the new measures. As individual New Measures projects develop, there will continue to be changes in the activities and it is likely each year will bring modifications in the agenda. And as the stages of the various projects in the New Measures Initiative are completed, the ARL Statistics and Measurement Program, in conjunction with the Statistics Committee, will determine how best to deploy the results of the project or how to take the project further. Likely scenarios for many of the projects include the incorporation of data elements into the statistical surveys, the development of workshops and consulting services for performance measures, and the establishment of data gathering and statistical analysis tools that the ARL Statistics and Measurement Program can offer on a cost-recovery basis.

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[xiv] A series of white papers addressed some potential areas of consideration <http://www.arl.org/stats/newmeas/nmbackground.html>.

[xv] The Interlibrary Loan and Document Delivery Performance Measures Study was a two-year effort to measure the 1995/96 performance of ILL departments in 119 North American research and college libraries. The study, funded, examined four performance measures: direct cost, fill rate, turnaround time, and user satisfaction. It was funded by The Andrew W. Mellon Foundation. <http://www.arl.org/access/illdd/illdd.shtml>

[xvi] Each project also includes links to other resources <http://www.arl.org/stats/newmeas/>.

[xvii] A full description of the project, a project bibliography, and related links appears at <http://www.arl.org/libqual/>.

[xviii] Project documents can be found at: <http://www.arl.org/stats/newmeas/emetrics/index.html>.

[xix] <http://www.arl.org/stats/newmeas/HEOSmithl.html>

[xx] More information on the cost study methodology is at <http://www.arl.org/stats/newmeas/tcs_overview.html>.

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Russian and CIS Library Internet Service: An Analysis of WWW-Server Development

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Abstract:

During the last decade there was great expansion of the Internet into Russian and CIS (Commonwealth of Independent States) libraries. This paper traces the growth of Internet from basic access to the development of WWW-servers. WWW-servers are analyzed by project, corporate library network, or geographical characteristics.

Russian and CIS Library Internet Service

The intensive expansion of the Internet into Russian and CIS (Commonwealth of Independent States) librarianship began before the end of the last century, from the middle of 1990s; and towards the end of the decade the Internet solidly entered into the daily routine of our libraries' operations. If in the initial stages provision of access to external Internet resources for users was the main task of libraries, today libraries primarily think about the establishment of their own Internet-servers (particularly WWW-servers) and putting their own products and services onto the Internet. Many libraries today create their own Web-servers, available to external users 24 hours a day, 7 days a week. In most cases this is possible thanks to support by Federal Ministries of Culture and for Industry, Science and Technology; and through the activities of charitable organizations, the Open Society Institute (Soros Foundation), and several other foundations. The Internet is becoming an essential part of library daily routine. At present several projects and programs are being implemented which aim to connect to the World Wide Web libraries located in regional centers with no Internet access, and in small towns and rural areas. This process has just started and a certain period of time is needed before we can talk about concrete results.

As of today no one has yet counted the exact number of library servers in Russia and CIS countries. Various national Internet search engines give different numbers of Russian libraries present on the Web; sometimes the difference is as many as 100 links. It is known for sure that the major federal libraries located in Moscow and St Petersburg, libraries of major state universities in Moscow, St Petersburg and regional centers, and the majority of regional central libraries in the Federation Subjects (these are administrative divisions in Russia; there are 89 Federation Subjects in all), all maintain their own Web-servers. Corporate library networks (CLN) with Internet access are formed in several regions. The number of members in a CLN can reach several dozen at present and networks of several hundreds are in prospect.

The present report offers an analysis of the most representative groups of library WWW-servers, arranged by projects, by CLN or by geographical characteristics. Russia is listed first as it has many more WWW-servers in libraries than other CIS countries. The main groups of libraries are as follows:

1. Federal, regional and local projects by the Ministry of Culture of the Russian Federation (RF), including the LIBNET program. All federal libraries (9 libraries) and several others participating in Ministry of Culture projects run Internet technologies. The following libraries should be mentioned here: national libraries of RF republics; regional general research libraries; regional and municipal children's and juvenile libraries; municipal public libraries; university libraries, museum libraries; libraries of the Russian Academy of Sciences; special libraries (for the blind, etc.); libraries of governmental bodies; libraries of trade-unions and other special bodies; sci-tech libraries; branch (medical and other) libraries. In all, over 280 libraries having Internet access and their own WWW-servers participate in Ministry of Culture projects as of today. The WWW-servers of the following libraries are the most advanced:

1.1 Russian State Library

WWW-server is available at: http://www.rsl.ru/
The server contains following information:
1. Information about the Library
a) Its history
b) Reading rooms
c) Collections
d) Services
2. Information resources accessible via the Internet
a) OPAC searching
b) Specialized database searching
c) Catalog of new acquisitions in the Library collections
3. ILL orders (fee-based service)
4. Electronic document delivery (Russian Courier service)

1.2 All-Russian Library for Foreign Literature

WWW-server is available at: http://www.libfl.ru/
The server contains following information:
1. Information about the Library
a) List of departments
b) Collections
2. Information resources accessible via the Internet
a) OPAC searching
b) Specialized database searching
c) Union Catalog searching
d) Full-text documents (electronic publications)
e) Catalog of new acquisitions in the Library collections
3. ILL orders (fee-based service)
4. Other information (lists of libraries, journals, etc.)

1.3 Russian National Library

WWW-server is available at: http://www.nlr.ru/
The server contains following information:

1. Information about the Library
a) Its history
b) List of departments
c) Collections
d) Services
2. Information resources accessible via Internet
a) OPAC searching
b) Specialized database searching
3. Electronic document delivery

2. The collaborative project LIBWEB (**www.libweb.ru**) is oriented towards the integration over the Web of the electronic resources of leading Russian libraries and information centers. This project is a part of the Federal collaborative program for the creation of the national computer communications network for science and higher education (1995-2001). The project is financed by the Ministry for Industry, Science and Technology of the Russian Federation, the Russian Foundation for Basic Research (RFBR) and the Russian Foundation for the Humanities (RFH). The Project unifies the Internet resources of about 20 general, scientific and university libraries and allows access to 85 WWW-servers of other Russian libraries. Among them are:

- 37 university libraries;
- 7 federal libraries;
- 30 regional and city public libraries.

OPACs are available in more than 80% of libraries. The number of bibliographic records does not usually exceed 300,000 records in each OPAC (excluding several federal libraries)

Interestingly, although the electronic resources developed in several libraries are sufficient, there are no full OPACs with over 500,000 records available on the Internet. The only exception is the Russian Union Catalog on Sci-Tech Literature maintained by Russian National Public Library for Science and Technology (**www.gpntb.ru**) with over 540,000 records. This occurs although libraries' electronic resources are developed well enough. For instance, the resources of the National Library of Russia (**www.nlr.ru**) contain over 2 million records; those of Russian State Library (**www.rsl.ru**) over 1 million records.

Among the most interesting WWW-servers available within the LIBWEB Project are:

- Kazan State University (**www.lsl.ksu.ru**);
- Tomsk Regional Universal Scientific Library;
- Russian State University for Humanities (**http://www.rsuh.ru**)

3. RUSLANet Project (**www.ruslan.ru**). This is the library network operating in the Russian North-West. It was designed within the framework of a project by the Open Library Systems Center (St. Petersburg). The main purpose of RUSLANet project is creation of a single information space for Russian North-West libraries and its integration into the European and World information infrastructure. RUSLANet is a network of university, scientific, school and special libraries unifying 48 libraries of the Russian North-West. All participating libraries are united by use of the Z39.50 protocol.

The RUSLANet project is designed on the basis of the following concepts and technologies:

- Client-server architecture;
- Open standards on all software levels;
- Orientation towards multimedia, CD-ROMs and other modern tools of information representation;
- Internet networking technologies (FDDI, ATM, others).

Geographically, there are participating libraries in Arkhangelsk (3 libraries), Novgorod (2 libraries), Kaliningrad (1 library), Murmansk (2 libraries), Petrozavodsk (2 libraries), Pskov (1 library), St Petersburg (20 libraries), Syktyvkar (2 libraries), Vologda (1 library) and several others. The following are examples of the most advanced library WWW-servers within RUSLANet project:

- M. V. Lomonosov Pomor'e State University Library, Arkhangelsk (**www.pomorsu.ru**);
- St Petersburg State Technical University Fundamental Library (**www.unilib.neva.ru**);

- St Petersburg State University Library (**www.lib.pu.ru**).

At present the St Petersburg universities determine the information content of the Project, although the participants' geographical scope is much wider. Other cities can be characterized as still developing an Internet information resource.

4. The network of Internet access centers in Russian universities. The Open Society Institute (Soros Foundation) has set up public Internet access centers at 33 universities in various cities of Russia. These centers were established within the framework of the University Internet Centers Program. Within the Program each participating university received its own WWW-server, on which University libraries were given the opportunity to mount their pages. These servers are accessible 24 hours a day, 7 days a week and consequently university libraries' home pages are accessible too. I should mention that the majority of university libraries do not maintain their own WWW-servers, but locate their pages on the general university server; this does not reduce information accessibility at all. Some universities also participate in the LIBWEB and RUSLANet projects, but the majority of universities participate only in this project. It's worth mentioning following WWW-servers in this program:

- Voronezh State University (**www.vsu.ru**);
- Urals State University (**www.usu.ru**);
- Novosibirsk State University (**www.nsu.ru**);

5. Corporate library systems (CLS). CLS have been and are being formed in several regions of Russia. This kind of system maintains one common server (in most cases it is the server of the regional general research library), where participating libraries mount their pages.

   Since 2000 the program "Library Automation" within the "Pushkin Library" megaproject of the OSI-Soros Foundation has supported 11 CLS (about 80 libraries) in various regions. This support is provided within the overall "Russian Corporate Library Systems" funding opportunity. CLS have been formed and operate in Ekaterinburg, Novgorod, Moscow, Nizhni Novgorod, Novosibirsk, Omsk, Petrozavodsk, St. Petersburg, Tomsk and Yaroslavl'.

   At present, CLS unite the most advanced libraries operating on the Internet. These libraries do not present just their own resources (OPACs, databases, full text documents) on the Internet, but produce corporate resources (union catalogs, corporate cataloging systems, retrospective conversion systems) as well. Some of the most content-rich CLS are:

- Moscow public libraries CLS (**http://corporate.gpntb.ru:8101**);
- St. Petersburg universities CLS (**www.ruslan.ru:8001/spb/univer**);
- Novosibirsk regional distributed CLS (**http://rstlib.nsc.ru**).

All CLS use the Z39.50 protocol alone to construct and operate resources.

So, taking into account the participants of all the above-mentioned projects we have over 400 library servers. Several libraries and library systems have their own Internet servers under development or already in use. By various measures, the total number of libraries in Russia with their own WWW-servers or mounting their resources with the assistance of various Internet providers already exceeds 1,000. The problem of an authenticated "census" of all libraries presenting their resources on the Internet requires solution and will evidently be solved soon.

In the majority of cases libraries mount the following resources on the Internet:

- Their OPACs;
- Specialized, subject-based and problem-oriented databases;
- Union and corporate catalogs;
- Full text documents;
- Factual and reference information.

The WWW-servers of the following libraries are considered the most developed, content-rich and using advanced technology:

- Russian National Public Library for Science and Technology (**http://www.gpntb.ru**);

- Moscow State University Scientific Library (**http://www.lib.msu.su**);
- Nizhny Novgorod Regional Universal Scientific Library (**http://www.nounb.sci-nnov.ru**).

The page "Window to the Library World" is maintained on the Russian National Public Library for Science & Technology (RNPLS&T) Web-site (**http://www.gpntb.ru/win/window/index**). This page contains constantly updated Internet addresses and descriptions of resources of several hundred libraries. Besides the RNPLS&T OPAC (350,000 records), free access to the Russian Union Catalog on Sci-Tech Literature database (540,000 records), to the popular digital reference source "Who's Who in the Library and Information World of Russia and CIS Countries" (1,800 entries) and other digital resources including full text publications, is allowed from this page.

The trend of quantitative and qualitative growth in library WWW-servers, their demand, usefulness and social significance is clear. Unfortunately, it is not as easy to obtain as detailed a picture of the subject in CIS countries yet. Nevertheless, the most favorable situation can be seen in the Ukraine, Kazakhstan, Uzbekistan, Georgia, Armenia and Azerbaijan at present. Only occasional information on other CIS countries is available and it is not worth analyzing it yet.

WWW-servers of Ukrainian libraries

According to national statistical data, the average Ukrainian accesses 10 times fewer Web pages than does the average Russian. As of May 2001, 36 Ukrainian libraries have a presence on the Internet, the largest single group (30%) being university libraries. The great majority of Ukrainian libraries' WWW-sites do not contain information resources as such.
It's worth mentioning the following WWW-sites here:

- V. I. Vernadsky National Library of Ukraine (**http://www.nbuv.gov.ua**);
- D. I. Chyzhevsky Kirovograd Regional Scholarly Library (**http://www.library.online.kr.ua**);
- Taras Shevchenko Kiev National University Scientific Library (**http://lib-gw.univ.kiev.ua**);
- Ivan Pulyui Ternopol State Technical University Scientific Library (**http://tu.edu.te.ua/library**);
- The Ukrainian Parliament (Rada) Library (**http://www.rada.kiev.ua/library**).

These libraries mount on the Internet not just their OPACs, but full texts of publications as well. The server of V. I. Vernadsky National Library should be particularly mentioned. It contains a digital library collection of about 10,000 records and the national abstracts database of publications by Ukrainian scholars. The "Ukrainian Legislation" electronic library located on the Ukrainian Parliament (Rada) WWW-server is also of interest. It contains full texts of 80,000 legislative documents adopted in the country since 1991.

WWW-servers of Libraries in Kazakhstan

The servers at the National Library (**http://www.nlpub.iatp.kz**), Republican Library for Science and Technology and Kyzylorda Regional Universal Scientific Library are worth mentioning. The national server (**http://www.kazakhstan.kz**) contains a lot of library information. There are totally about 11,000 libraries in the country but very few of them have Internet access.

WWW-servers of Libraries in Uzbekistan

The WWW-servers at the National Library, Fundamental Library of the Uzbek Academy of Sciences, State Scientific Medical Library and several others attract our professional attention. The Uzbekistan Library Association and the Soros Foundation have made a large contribution to the development of Internet technology. The WWW-server at the Fundamental Library of the Uzbek Academy of Sciences (**http://www.mfu.uz**) is considered the most advanced.

WWW-servers of Libraries in Armenia, Georgia and Azerbaijan

Statistics on these countries are few. The national and university libraries, several information centers and governmental agencies maintain good WWW-servers.

This paper establishes a new direction for research into Internet systems in CIS countries, particularly in libraries and in institutions for science, culture and education. We hope to proceed with this work further, to collect additional data and present a detailed analytical report at the next IFLA Conference. We think that this would be useful and interesting.

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Managing Service Quality with the Balanced Scorecard

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Abstract:

Libraries are collecting scores of data about their collection, services, use, and costs and about the quality of their services and products. In order to evaluate and utilize these data for the management process, a systematic approach is needed.

A German project, sponsored by the German Research Council, uses the Balanced Scorecard as concept for an integrated quality management. Performance indicators across four equally significant perspectives - users, finances, internal processes, and potentials (innovation) - are combined to produce a "balanced" evaluation of the library.

The data in the controlling system

Traditionally, libraries have collected statistical data about their collections, acquisitions, lending, and interlending activities. In time, these statistics were enlarged and differentiated, and in many cases now comprise several hundreds of separate data, ranging from the number of incunabula or microforms in the collection, expenditure on preservation or buildings to the number of issues, claims and reservations or the visits to exhibitions and special events. These statistics are in the most part collected nationally, but libraries tend to collect other statistics additionally, e. g. for special tasks and activities like legal deposit right, special collections, or services for special user groups.

All those statistical data could be used as steering instruments for library management, but more often than not such use is rather accidental than systematical, and many data are collected laboriously without ever being evaluated.

Far several decades libraries have tried to assess not only the quantity of their resources and activities, but also the quality, the "goodness" of a library's services and products. Performance measures for libraries have been developed and tested in national and international projects and standardized in an international standard[1]. Though there are lists of recognized and established performance indicators, such indicators have not been collected systematically, like the national collection of statistics, but rather in the evaluation process of a single library.

Both statistics and performance indicators were developed for the traditional library, with print collections, reading rooms and lending services. The growing importance of electronic services in libraries has led to a revision of both statistics and performance indicators. The international standard of library statistics has been revised and enlarged to include the data of the "digital library"[2], and a working group of ISO (International Organisation of Standardization) is drafting a Technical Report about performance indicators for electronic library services[3]

Another sector of management data has evolved during the last years: Cost data. Libraries have always registered data of their income and expenditure. But the general demand for transparency of costs has led to questions like:

- What are the costs of each single service or product of a library? (e. g. one issue, one reference question answered)
- How do the costs of a service or product split up as to staff costs, administrative costs, equipment etc.?

More and more libraries are involved in cost analysis projects of their institutions, or are trying to analyse their costs in order to present reliable data when applying for funds or allocating resources. Models for cost analysis in libraries have been tested and developed[4] and will probably be used widely in the future.

There is an immense pool of management data available today in libraries: Statistics of resources, services, and use, cost data and combined data like performance indicators for the quality of library services. The quantity, diversity and complexity of the data stresses the need for an integrated system to make their management useful for evaluation, strategy and action.

The project

A German project, sponsored by the German Research Council (DFG), has developed an integrated quality management system for academic libraries. The project is chaired by the University and Regional Library Münster, partners are the Bavarian State Library Munich and the State and University Library Bremen. The three libraries are among the largest in Germany, each with special tasks, activities, and operating conditions. Thus the project could rely on a broad and differentiated view of management issues in academic libraries. The project started in June 1999 and will be finished in autumn 2001. The results will be published in a handbook and a software for the data collection and the management process will be added.

The project partners decided to use the Balanced Scorecard[5] as tool for the management system. This concept was originally developed for the commercial sector. It "translates" the planning perspective of an institution (mission, strategic vision and goals) into a system of performance indicators that covers all important perspectives of performance: finances, users, internal processes and improvement activities.

The system thus integrates:

- financial and non-financial data,

- input and output data,
- the external perspective (funding institutions, users) and the internal perspective (processes, staff),
- goals and measures taken,
- causes and results.

The basic model of the Balanced Scorecard, adapted to the conditions of academic libraries, deviates from the original model in placing not the financial, but the user perspective foremost. Libraries do not strive for maximum gain, but for best service.

Figure 1: The Balanced Scorecard

The user perspective

The indicators chosen for the **user perspective** correspond to the fundamental goals of reaching as large a part as possible of the population and of satisfying their informational needs by the services offered.

- **Market penetration** = Percent of the population registered as actual users
  For an academic library, its population to be served will probably consist of the members of the institution (university, scientific institute etc.) it is set up to serve.
  It would, of course, be still more interesting to asses the members of the population who made use of library services during a specified time, including electronic services and remote use. But this, for many libraries, is still difficult to measure.

- **User satisfaction rate**
  The indicator is assessed by satisfaction surveys on a 5-point-scale.

- **User satisfaction with opening times**
  Again, this indicator is assessed by surveying.

- **Library visits per member of the population**
  The visits to the library premises (counted by turnstile, electronic counter etc.) are compared to the number of members of the population.
  "Virtual visits" (cases of remote use) could be included if libraries can differentiate remote use by members of the population from other cases of use.

- **Immediate availability**: Percent of immediate loans of total number of loans (including reservations and ILL)
  The indicator shows whether the collection covers all topics asked for by users and whether there are sufficient copies.

Two indicators assess the use of electronic services offered by the library and the growing portion of that use coming from outside the library building:

- **Percent of the population using the electronic library services**
  This indicator is assessed by a survey. Electronic services include the OPAC, the library's website, electronic databases, journals, and other documents, and electronic document delivery.

- **Percent of remote accesses to electronic library services of all accesses**
  This indicator assesses to what amount library services are used from outside the library. One access (or: log-in, session) is one established connection to an electronic library service.

The financial perspective

The indicators for the **financial perspective** answer to the question whether the library is functioning in a cost-effective way. The goals comprise low costs per instance of use or per product and a high proportion of the total budget spent on the print and electronic collection.

- **Total costs of the library per active user**
- **Total costs of the library per library visit**
- **Acquisitions expenditure compared to the total costs of the library**
- **Percent of staff costs per library service / product to total staff costs**

A last indicator shows the allocation of resources to the electronic library:

- **Percent of acquisitions expenditure spent on electronic media**

The perspective of processes

For the **perspective of processes**, the underlying goals are to organize all processes in a way that in spite of budget restrictions allows space for investment into new developments and improvement of service. The indicators pick out background activities as examples of process organisation.

- **Acquired media per staff year**
  Staff in the processing department is counted in FTE (full time equivalent)
  The processing department comprises all activities from acquisition and cataloguing to binding and shelving the new media.
  Electronic media are not included in this indicator.
  Book processing is here seen as a typical example for the effectiveness of background processes.
- **Average media processing time**
- **Number of stages involved in providing a product / service**
  (for every library service / product)
  The indicator tries to assess, whether processes are streamlined and well organized. Typical examples are collection building and document delivery services.

Again, one indicator was chosen to show the allocation of resources to the electronic services:

- **Percent of all staff costs spent on electronic services**
  Library staff planning, maintaining, providing, and developing electronic services and providing and cataloguing electronic media is calculated in FTE (full time equivalent). The definition could also comprise staff in user services, e. g. reference and training services, dealing with electronic media, and the staff involved in the contents of the website.

The perspective of potentials

The last perspective, named "**potentials**", describes the capability of the library to cope with the challenges of the future, its ability to change and improve. The institution's engagement for the library is indicated by the budget it allocates to the library; staff as the main factor for all development is represented by two indicators for teaching and engagement.

- **Library budget as percent of the institution's budget**
  (project funding is excluded)
- **Percent of the library's budget from project funding (special grants) or income generation**
  "Special grants" comprise all funding the library gets by special claims, not by the "normal" budget.
  This indicator assesses whether the library is successful in claiming additional funding or in generating income.
- **Number of training lessons per staff member**
  The indicator assesses the average number of times each staff member has participated in training lessons.
- **Number of short-time illnesses per staff member**
  A short-time illness is an absence from 1 to 3 days.

STRATEGY WITH THE BALANCED SCORECARD

One great advantage of the Balanced Scorecard is that it can visualize relationships of cause and effect between target values, evaluation data and actions taken.

The following example shows the planning process from the definition of goals and target values and the choice of adequate indicators to the actions that the library takes to achieve the target value.

Figure 2: Managing with the Balanced Scorecard

As the mission of academic libraries is in many aspects identical, the indicator system of the project might be used as reference model for benchmarking purposes. Individual varieties in libraries can be expressed by different target values and operational actions. Thus, a library whose main task is to provide basic information for students will further the use of electronic media by offering multimedia learning material. A special research library, on the other side, would perhaps offer its scientific journals in electronic form to achieve the same result. In spite of such differences, benchmarking would be possible.

The implementation and continuous use of the Balanced Scorecard demands a large set of data. The project has developed a special tool named *Library Audit* based on a system of data analysis (OLAP) that allows the multidimensional and flexible analysis of data collections.
The library in Münster has already filled Library Audit with several thousand data, classified as to the library's products and services. Benchmarking data of other libraries are added continuously. Many of these data will not be used in the strategic evaluation of the Balanced Scorecard, but the large data pool can be useful for many operational problems.

The number of indicators for the Balanced Scorecard has been purposely kept small in order to avoid a flood of data without direct relevance for the strategic management. When choosing the indicators for the Balanced Scorecard the project libraries oriented themselves by the concept of the hybrid library that combines electronic and traditional library services in a comprehensive function.

Structuring and implementing a scorecard model for a library demands a clear formulation of mission and strategic goals - a duty that has not yet been performed by every academic library.

The most important issue in the integrated controlling concept is not to look at different quality aspects separately, but to keep them all in view. An example shows the steps of measuring quality in collection building:

1. The costs per document processed are low
   Does that mean that there are back-logs?

2. Processing time proves quick and adequate. Processes are well organized.
   But perhaps there is no time for claiming overview orders?

3. Claiming is done regularly and in good time.
   Maybe staff is overworked, and absence rates because of illness are rising?

4. Illness rates are quite normal, and a staff satisfaction survey shows high satisfaction with the job: Everything looks fine.

5. But: Collection use is going down, and a user survey shows dissatisfaction with the collection:
   Apparently, much well-organized labour has been spent on the wrong material.

Service quality has many aspects - the Balanced Scorecard integrates them.

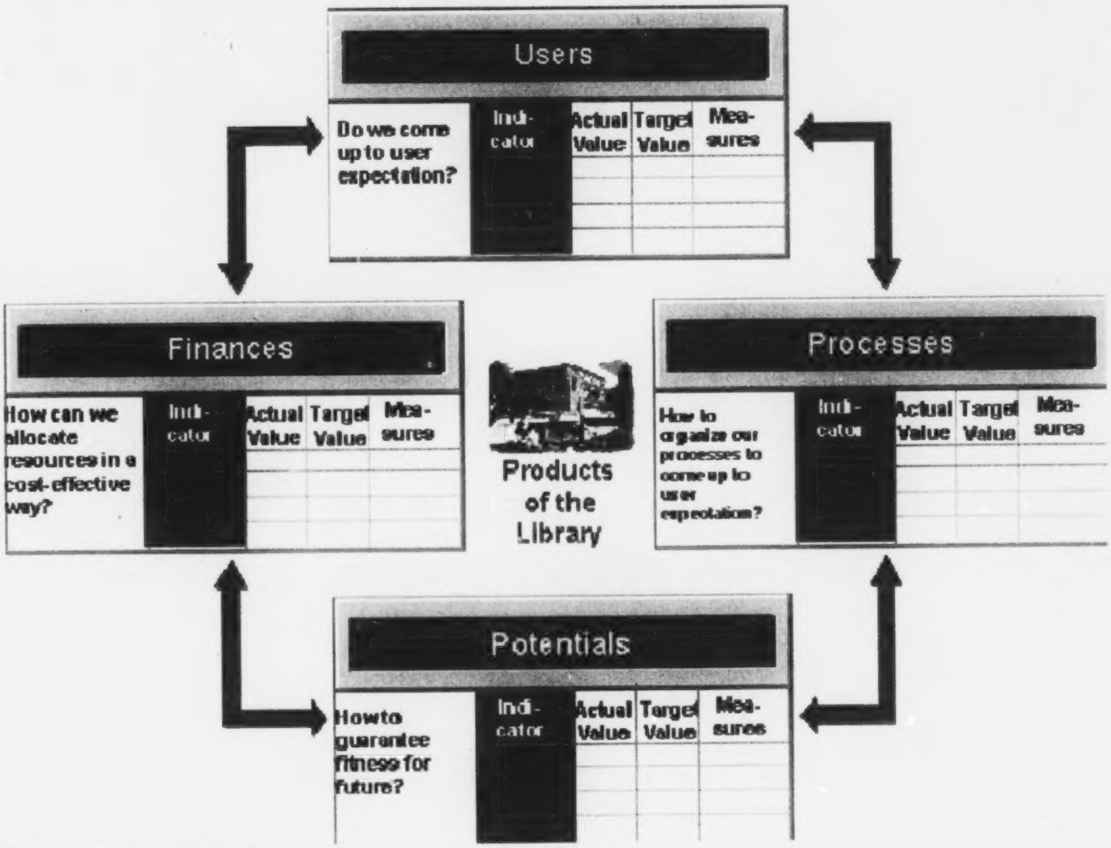
Users
Do we come up to user expectation?
Indi-cator
Actual Value
Target Value
Mea-sures
Finances
How can we allocate resources in a cost-effective way?
Indi-cator
Actual Value
Target Value
Mea-sures
Products of the Library
Processes
How to organize our processes to come up to user expectation?
Indi-cator
Actual Value
Target Value
Mea-sures
Potentials
How to guarantee fitness for future?
Indi-cator
Actual Value
Target Value
Mea-sures

Figure 1: The Balanced Scorecard

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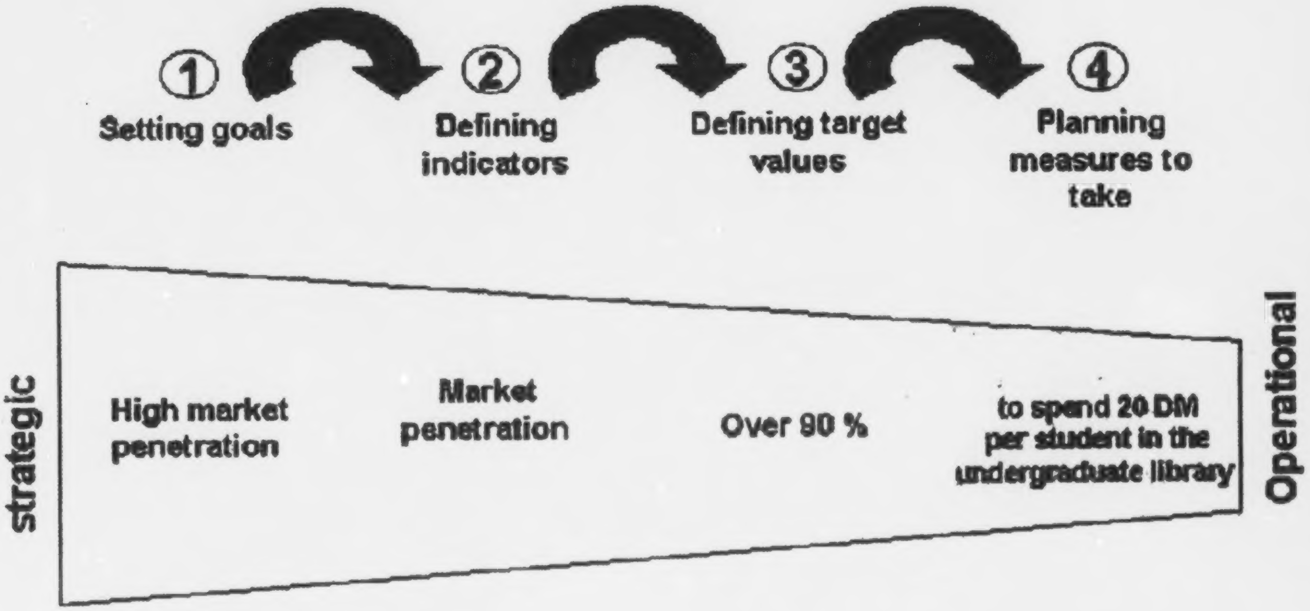
①
Setting goals
②
Defining indicators
③
Defining target values
④
Planning measures to take
strategic
High market penetration
Market penetration
Over 90 %
to spend 20 DM per student in the undergraduate library
Operational

Figure 2: Managing with the Balanced Scorecard

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Meeting Number: 136
Simultaneous Interpretation: Yes

The IFLA/UNESCO Public Library Guidelines

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At the last three IFLA conferences I have given a paper on the revision of IFLA's Guidelines for Public Libraries. On each occasion I have given a progress report and asked for comments on the draft we had prepared. These were lively meetings and an important part of the consultation process. The comments we received were very useful to us in finalising the revised document. Today my task is a rather different one for I am happy to announce that the Guidelines are complete and have been published by K.G.Saur as an official IFLA publication. Importantly the Guidelines have for the first time been endorsed by UNESCO, who have also generously provided funds for them to be translated into the UNESCO languages.

This morning, therefore, I want to give you the details of the publication and an outline of its contents. There will be an official launch of the new version of the Guidelines on Wednesday morning at 9.00 and you can order the revised version at either the K.G.Saur stand.

This publication is part of a continuum in IFLA's policy making on public libraries. This started with the first version of the IFLA Public Library Manifesto in 1949, continued with the second Manifesto in 1972, the "Standards for Public Libraries" published in 1973,the "Guidelines for Public Libraries" published in 1986and most recently the third version of the Manifesto published in 1994.

The Manifesto is an important statement of principle but Committee of the Public Library Section realised there was a demand for a more detailed document and that the dramatic changes in the information world had rendered the 1986 Guidelines obsolete. In drafting a document, which we hoped would have world-wide relevance, at a time of unprecedented change in ways of storing, accessing and using information we faced a number of challenges. Perhaps the most significant could be summarised as follows:

Is it possible to produce guidelines and standards for public libraries that will have relevance world-wide?

What is the role of the public library in this age of rapid and dramatic development in information and communications technology?

Does the public library have a future or is it a 19th Century institution which has no future in the 21st century?

There was a clear message from the outset that librarians were hoping for some international standards that they could use in developing their public libraries. In some areas, notably building standards, this is very difficult but we have given examples of standards used in different countries. We have proposed some standards in staffing levels and collection development that we think will be useful to librarians in many societies. As well as standards we have included brief summaries of initiatives and services to illustrate the text. This is a feature of the guidelines and we have included 79 examples from 44 different countries. We do not say these are the most outstanding examples of public library provision but they are an indication of the way public libraries in different countries have responded to the challenges they face. We hope these examples will give both ideas and encouragement to those who use these guidelines.

It is no exaggeration to say that the last few years have seen the most rapid and dramatic developments in information and communications technology in history. The public library is radically affected by these developments. Even in the three years of the project the changes have accelerated and there is little sign of any reduction in the speed of change.

There were those who said that we should promote the adoption of information technology as the basis for all future development with the implication that we should not support the development of print-based services. The developments in ICT, particularly the Internet give public libraries many exciting opportunities which many have taken eagerly and in a creative way.

There is another story. The United Nations Human Development Report 1999 while stating that the Internet was the fastest growing information tool also revealed that South Asia with 23.5% of the world's population had less than 0.1%of the world's Internet users. A quarter of the countries of the world have less than 1 telephone per one hundred people. The risk of a growing gap between the information rich and the information poor has never been greater. This gap is not just between countries but also between groups and individuals within countries. The UN Report says "determined efforts are needed to bring developing countries and poor people everywhere into the global conversation"

This presents public libraries with an exciting opportunity to help bring everyone into the global conversation. To do so should the public library nail its colours firmly to the technological mast and accept that print-based and other services should no longer have a high priority?

We took the view that to fulfil the principle of access for all libraries must continue to provide information in a variety of ways, for example through print and the oral tradition. While becoming the gateway to the electronic information world they should not close the other doors through which knowledge and information are provided. This presents public libraries with a major challenge and their success in meeting it will determine the future of public libraries.

This begins to answer the question: does the public library have a future. Working on this project has made me realise how, though we live in a world dominated by market forces, public libraries throughout the world at different stages of development and with varying levels of resources are continuing to grow in response to public demand. As long as public libraries meet the needs of the public and act as an agency for change they will continue to develop. They must also meet high standards of service as they are in competition with other agencies for people's time and specifically with other information providers for public interest and support. If they lose that public support they run the risk of becoming irrelevant and losing their place in the social fabric. We believe these guidelines will help public librarians to achieve these goals

I will show you the structure of the new guidelines and go very quickly through the approach we have adopted. For more detail I suggest you get a copy of the guidelines themselves.

We have highlighted what we see as the three key roles of the public library. Different societies give these different levels of priority. It is very important that priorities are agreed and maintained to ensure the most effective use of resources.

Education
Information
Personal Development

Support for formal and informal education has been a key function of public libraries since their inception. For many countries it is the primary role of the public library service.

The acquisition of reliable information is vitally important enabling people to enjoy fulfilling lives and be fully participating citizens. There are now many ways in which people can access information so public libraries have prove by their performance that they are one of the key agencies. They require policies, plans and services to enable them to provide high quality information services.

Public libraries have always played an important role in providing opportunities for personal development. They provide a range of ideas, opinions and creative experience not available any where else. Many people, famous and otherwise have said how their lives have been changed by the use of public libraries. The provision of books and other materials including access via information technology, paid for by the community and for the use of the community, brings the world's knowledge and literature to everyone. This is an amazing achievement and makes the public library a unique institution.

Librarians have always been concerned with the quality of the information they provide and organising access to it. In this changing information world this remains a core function. The librarian is now the knowledge navigator presenting new and exciting challenges in this information age.

To fulfil its functions the public library should be supported by legislation and adequate and sustained funding. They should be well governed and administered. It is very important that they represent all ranges of human experience, free from the risk of censorship. Librarians and their governing bodies must uphold these basic human rights and resist pressure from individuals and groups to limit the material available in the library.

Public libraries must aim to meet the needs of their users. The guidelines stress the importance of community needs analysis, user involvement and the judgment and experience of the librarian as the key factors in determining the shape of the public library.

A fundamental principle of the public library is that it should be available to all and not just to the able-bodied, literate adults able to visit the library. The public library must be service-focused, developing services that met user's needs and delivering them where they will be most effective. Library services must go beyond the walls of the library and the development of information technology provides many new ways of accessing services from the home or the workplace. We have heard of many imaginative ways in which the service is provided.

A high standard of customer care should be an integral part of all policies and procedures. User education is increasingly important with the advent of information technology. No public library, however large and well-funded can meet all the needs of its users from its own resources. Public libraries should be part of networks and resource-sharing schemes to enable them to meet the public's demands.

Libraries are made up of collections of information and cultural materials in a range of formats. We have proposed standards for collection development while recognising that these will have to be adjusted to meet local circumstances. The key criterion must be the relevance and currency of the collection not its size. Organising access to materials in the library and beyond is an important part of collection development.

Staff are a crucial part of any library service. We have included what we see as the main duties of the librarian though no list can be exhaustive. Library staff must maintain high ethical standards if they are to retain the confidence of users. Effective staff training is vital at a time of such major changes in library and information services.

The quality of management is an important element in the provision of a successful library service. Library managers must develop skill to enable them to provide effective leadership and build good working relationships with their governing body, the staff and the public they serve.

Public libraries will not realise their full potential if they are not actively promoted in the community. Librarians should develop marketing and promotion plans and be able to work with the media and in the community. We should not forget that satisfied users are the best advocates for the public library.

This is a very brief outline of the major statements within these guidelines. I hope you will obtain a copy to enable you to examine in more detail the conclusions that the working party have reached after a lengthy consultation process and see how the guidelines relate to your own situation.

What happens next? As I have explained the guidelines will be translated into the UNESCO and IFLA languages. We have already received a number of requests to translate the guidelines into other languages, and the translation work has already started in some countries. The Public Library Manifesto is now available in over twenty languages and it is my hope that these new guidelines will be available in at least as many languages. If, therefore you want to organise translation into your own native language contact IFLA Headquarters who I am sure will be happy to give you permission to do so.

With the participation of public librarians throughout the world we have spent three years drafting and refining these guidelines and standards. Our hope is that you will make use of these guidelines in meeting the great challenges and opportunities that public library services now face. You now have an additional weapon in the battle to provide exciting and relevant public library services. We wish you every success in achieving that important goal.

Philip Gill

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Professional Group: Management of Library Associations
Joint Meeting with: -
Meeting Number: 137
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Can "twinning" be applied effectively to small Library Associations?

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Abstract:
Small associations bring unique perspectives to any twinning discussion. This paper examines twinning between library associations in general and with particular emphasis on the small associations experience. It examines their characteristics and discusses the perceived benefits and challenges such a twinning partnership provides. Are the obstacles facing small associations too formidable? The paper advances the view that the challenges can be overcome and that there are a set of circumstances that create successful twinning. It ends by discussing the role of small associations in fostering this success and makes recommendations on ways large associations and IFLA/RTMLA can assist in the endeavour.

INTRODUCTION

Madame Chair, colleagues on the platform and in the audience, I wish to thank the RTMLA for inviting the Commonwealth Library Association (COMLA) to represent small associations at this discussion of twinning at IFLA 2001.Small associations bring unique perspectives to any twinning discussions. By virtue of the spread of its members in 52 of the 54 Commonwealth countries (former British colonies) and its high number of small national associations, ranging from a membership of 17 to 300, it is well equipped to speak on their behalf. COMLA, founded in 1972, is an association of national library associations. It is funded by the Commonwealth Foundation and is one of the few Commonwealth Associations with headquarters in a developing country. Despite the existence of a few affluent countries among its members, and the progress made over the years, many countries are still poor and face acute problems. They are described in the "Harare Declaration" of Commonwealth Heads of Government, which seeks to address these problems, as having "excessive population growth, crushing poverty, debt burdens and environmental degradation and the smallest of these are very vulnerable because of their small societies." (29)

There is as we know, no easy solution to these societal problems but any initiative that attempts to promote dialogue between cultures, to bridge the growing divide between the information rich and the information poor through partnerships, is timely and appropriate. Hopefully, from these discussions a blueprint will emerge on what needs to be done in the future to assist small library associations everywhere to empower themselves, increase their capacity to deliver and become engines of growth and change in the knowledge society. In the words of the President of the Malawi Library Association, " *the discussions are very welcome and we look forward to the outcomes.* " I cannot claim to represent small associations everywhere, but I hope there is enough common ground with which other small non-commonwealth associations will be able to identify.

At the onset, I would like to define twinning and set it in a general framework for purposes of discussion. I will then look at the characteristics of small associations and discuss their perception of the benefits and challenges of twinning. Will the hurdles prove too formidable or, is there a set of circumstances that could be created to make association to association twinning fully viable? What is the role of small associations in creating a win-win model? Are large associations doing enough? How best can they help? The paper ends with recommendations to the **IFLA/ RTLMA** for strengthening its impact on members and the leadership in associations.

DEFINITION

As the first speaker, it will be useful for me to spend some time discussing what twinning is. Twinning can be many things to different people – it can mean a mentoring relationship where the more experienced party mentors the other, an agreement where personnel is exchanged, or simply an information sharing arrangement between two parties. It can be a loose relationship on an ad hoc basis, or a more formal one drawn up in writing. In terms of geography, twinning has traditionally been applied to inter- country relationships but it may also be applied to relationships within the same country. A general definition of twinning can be found in the Interagency Coalition on AIDS and Development publication, Beyond Our Borders: Guide to Living for HIV/AIDS Organisations. There, twinning is defined as *"a formal substantive collaboration between two organisations"* (ch.1). A few words in the definition are worth examining. **Formal** means that twinning can be a verbal or written arrangement. **Substantive** highlights the fact that twinning is not just one contact but a connection that lasts over a period of time, in other words, something that is sustainable. **Collaboration** implies that partners work together on a specific programme with each contributing as able, for instance in a research project. Other examples include working together to set up a new service, to organise a campaign, in co-publishing ventures or in social projects that help to make a difference in society. Collaboration openly acknowledges the importance of each partner for the success of the venture.

In a library context, twinning has been defined as the on-going relationship between two [**library associations**] in different countries for the purpose of improving the practice of librarianship across national boundaries. The twinning relationship we are told should have mutual but not necessarily equal benefits to both [**associations**]. (Doyle and Scarry 3). The emphasis in the latter definition on relationships would also imply that both partners should be accorded mutual respect.

General perspectives

The origin of the twinning of libraries concept has been described by Sheila Lampart in her paper Twinning of Libraries: Objectives Relating to Public, School and University Libraries. It will therefore be sufficient here to mention that it is a recent development born out of twinning experiences between cities and out of the movement of resource sharing for the betterment of library services globally. Further developments have been triggered by advances in information and communication technologies which instantaneously link those with access to the technology, making it possible for the average citizen to be exposed very quickly to what obtains outside his or her national borders. Side by side with this phenomenon, has been growing recognition in both rich and poor countries that no single institution or association on its own is able to satisfy completely the information/knowledge needs of an increasingly diversified and global- thinking stakeholder. In view of these trends, it is not too surprising that we see renewed focus on strategic links, alliances and partnerships to help bring about better fulfilment of our goals.

In 1991, Nancy John reported on twinning projects in which IFLA members had been engaged between 1984 and 1989. The publishing of the Guidelines on twinning by UNESCO in 1994, the success stories of the Sister Libraries in the USA [1], the developing of the IFLA international database[2] to act as a focal point for libraries seeking a potential twinning partner, the seminar on library twinning held in Jerusalem in 2000[3], were all landmarks in the evolution of library to library twinning. There have also been several cases of successes by individual institutions and networks that initiated agreements with compatible partners.

While there have been many examples of successful library to library twinning arrangements, there does not appear to have been much twinning in the defined sense, between library associations (I believe you will hear of one such relationship between the Zimbabwe Library Association and the Swedish Library Association in the RTMLA Workshop). Much more has been seen of associations donating books or equipment to a particular institution, supporting the attendance of individual/s at a conference or workshop, or in some cases participating in an allied activity within a country. The Zimbabwe International Book Fair (ZIBF) is one such activity[4]. Since 1998, the IFLA Round Table for the Management of Library Associations (IFLA/RTMLA) has tried to collect information on twinning/mentoring partnerships of library associations. However ,the project has been dogged by lack of information and has been abandoned in favour of creating a document on how to start a twinning mentoring project accompanied by examples of successful relationships. Perhaps other associations with twinning experiences could share these, as both success and failure will be useful in accumulating information on association to association twinning.

SMALL LIBRARY ASSOCIATIONS

The aspirations of small library associations in developing countries are similar to those of small and large associations everywhere. They seek to provide leadership for the profession, develop and improve library and information services within the country and improve the salary and status of librarians. While there is a commitment on their part to fulfil these goals, there are several challenges that prevent their realisation.

CHARACTERISTICS

Many small associations perform fairly well, in spite of their small number base because they have a small band of enthusiasts who believe in and work for the betterment of the association. Such associations could certainly benefit from a partnership which helps to stretch their limited resources and assist them in operating at a higher level for greater impact. The following are additional characteristics of small associations in the Commonwealth:

- Limited funds or none at all
- Volunteers as managers of the association
- Absence of full time office or secretariat

- Low image within the country
- Irregular publications or none at all
- Lack of computers or other equipment
- Changing addresses
- High degree of member apathy

These characteristics were arrived at by virtue of frequent contact with the associations and from the results of a survey that had been conducted in 1997 [5]. One should be aware of these as they can at times pose challenges in building and sustaining relationships.

Despite the characteristics outlined above, it is important to note that there are important differences between small associations. Some associations have performed at a relatively high level and should be identified and assisted to enhance their capability and impact as models for associations in resource- poor countries. There are others which started out well but which are faltering, that is, they started out well but need to partner with another association, to help them to become sustainable. There are still others that need help in setting up an association as the few professionals in the country seem to operate in isolation - the Bahamas seems to be an example of the latter as also is the Cook Islands in the South Pacific which reported having 13 libraries but no association. In summary, there are many real problems in small library associations and despite the progress that has been made, all require assistance in one form or another to become strong and sustainable .

BENEFITS OF TWINNING

According to Lampart, twinning should contribute to enrichment and enhancement of services, increased knowledge and understanding of indigenous cultures, personal growth and development of individual staff members, greater interaction between professionals, the sharing of strengths and addressing weaknesses (32)

In March this year, I conducted an informal survey of some 26 small national associations (Appendix 2) within COMLA to get "on the ground" information on what these associations would perceive as benefits of twinning. Because of time constraints, I selected from those which had active email addresses. Of this number, 20 replied. The following benefits reflect the interests of small associations and include:

- Exchange of visits or attachments
- Improved access to information on library association management
- Expanded leadership training opportunities
- Exchange of information/publications
- Exposure to advanced and up to date technology and benefiting from such services as hosting a web page
- Opportunity to share techniques for problem solving

It is worth noting that some small associations also sought benefits that were specific to their environment e.g.:

- **Fiji** – Sharing information on library association management with emphasis on fund raising through foundations
- **Jamaica** – Assistance in seeking funds for setting up a secretariat
- **Kenya** - Promotion of writings and publications by members of the Association
- **Lesotho** - Assistance with the payment of IFLA fees and with the setting up of the office centre

- **Malawi** - Assistance with training of members ,as most are not professionally trained and there is no library school in the country
- **Malta** - Twinned association members would give talks when visiting Malta and share experiences of the practice of the profession elsewhere.
    - Share experiences and contacts in specialised areas of the profession.
    - Facilitate the visits to libraries and other related institutions when twinned partner association visit each other's country.
- **Papua New Guinea** -
    - Funding for the establishment of a secretariat to co-ordinate in - house
    - training
    - How to conduct membership drives and provide incentives for rural
    - communities and school libraries

Many of the expectations here are not in keeping with the electronic networked environment in which we live and serve to highlight further the significant differences of perspective and experiences between associations in the developed and developing world.

WHAT WOULD SMALL ASSOCIATIONS BE ABLE TO OFFER IN RETURN?

All associations which responded to the survey, were willing to offer benefits in return. The most frequently chosen options were:

- Acquiring selected local materials, books, newspapers, CD's, etc.
- Co-hosting any local seminar/workshops by providing local expertise
- Facilitating exchange of cultural/library related visits
- Offering cheaper meeting venue for some conferences.

Of the reciprocal arrangements small associations are able make for their twinning partners, it is likely that some associations may be able to offer one or a combination of the above services or others, for instance- cultural exchanges, as requested. Others may only be able to offer one with any reliability and regularity and it would therefore be in the interest of both partners to tailor exchanges to what is manageable and adds value to their environments.

CHALLENGES TO SUCCESSFUL PARTNERSHIPS

Among the challenges to successful association twinning are the following:

- The priorities of some small associations may not synchronise with those of prospective partners. It is instructive to note that, the lack of a secretariat and permanent staff as well as lack of funds to execute parts of any agreement ranked high among their areas of priority. These may not be priorities for some partners.

- Lack of large numbers of adequately skilled persons to implement programmes and services on an ongoing basis could frustrate partners and lead to premature withdrawals because of long implementation delays.

- Underestimating difficulties and the complexities that may be involved in a potential partnership. There are the problems that relate to cultural differences and the pace at which different societies do different things.

- Problems relating to availability not only of foreign but also of local currency as most associations have no budget or serious financial provision

In addition, the GLOBAL recommendations of the IFLA Section on Education and Training, Social Responsibilities Group[6], outline many of the key issues that face librarians and library associations in the developing world, and these in themselves represent formidable challenges for twinning partnerships.

These challenges beg the question – who has patience for all this? If we as a profession seek to be at the cutting edge of the knowledge society, we have no choice but to be patient. Until library associations everywhere are equipped to execute the functions expected of them in civil society, our image as a profession will remain a topic for discussion.

WILL FORMAL TWINNING WORK?

There is no doubt that small associations perceive twinning to be a beneficial endeavour. The issue then becomes, given their fragility, is it possible for successful library association twinning to take place? There really is no simple yes or no answer. In the case of libraries, we have seen many twinning arrangements that work -Martin Kesselman's account of those of Sci-tech libraries, the Sister Libraries success stories and those of many individual libraries are cases in point. Despite these successes however, one has also seen examples of library twinning arrangements that did not work.

The Jamaica Library Service (JLS) the national public library service in Jamaica, has had one example of success and one of failure with a library to library twinning. The success story involves the Miami-Dade County Library which has a large Caribbean population as part of its clientele. The JLS did not actively seek a partner for twinning and the initiative seems to have been started as part of the Sister Libraries programme. The Kingston and St Andrew Parish Council (KSAC) which is the local government authority with responsibility for the twin city relationship between Miami-Dade and Kingston received a request for an exchange of storytellers as part of a cultural exchange programme. This was then passed on to an official in the Ministry of Education, who fortunately knew that the Public Library Service was the appropriate venue for this cultural exchange. She then made contact. The usual problems of lack of funds for air fares and accommodation were overcome, because the librarians from Miami-Dade wrote up a project proposal and raised funds to finance tickets for both their storyteller and the two who were to be sent from Jamaica. For their part, the Jamaica Library Service arranged the professional programme for the visit, for accommodation, and for social events that would expose the visitor to the culture of the country, which for a tourism-focused environment was also beneficial. Subsequent correspondence indicated that the Miami-Dade Library assessed the exchange as being very successful. Both libraries will exchange videos of the visit and attempt to continue the relationship. Despite the fact that the partnership was not solicited and was rather roundabout in nature, success was achieved.

There are also unsuccessful ventures. The JLS, which has been frequently cited as a model public library system for a developing country has had a twinning partnership that did not work. In spite of the contact established through the IFLA database with a proposed partner in Tanzania, there was not much response from the other partner. When it became evident to the Jamaica Library Service, that the main objective was to observe the Jamaican system, no funds were available on either side to support the airfares that would be required for travelling and it therefore was not surprising that the partnership died a natural death.

There is not much evidence to show on formal twinning of library associations but there is enough to show that informal relationships have been handled quite successfully in the past and there is reason to believe that with commitment on both sides, the same could apply for formal twinning arrangements. (Appendix 1 gives two examples of informal associations from Jamaica). In the countries that were surveyed, library to library twinning is likely to stand a better chance of success as the organisational infrastructure tends to be more permanent, gives visible support and lends authority to an agreement despite lack of funding and other problems. Library associations in these same countries face greater challenges, when one considers that they have no budgets, secretariats are non- existent or peripatetic and that volunteers are few and come and go at will. It would appear then that more commitment, sensitivity, flexibility, creativity and teamwork would be needed on both sides if the partnership were to succeed and make a positive difference. This point cannot be over-emphasised.

FACTORS LEADING TO SUCCESS IN TWINNING ARRANGEMENTS

Associations can learn much from the successes and failures of libraries. In all the cases I have looked at, the driving force towards success has been much more about "commitment" and "enthusiasm" for the cause than about the presence or absence of resources. Other prerequisites include basic knowledge and understanding of the partner's library environment. This helps in minimising the problems that can arise because of national or cultural biases.

For instance in most territorially small nation states in the Commonwealth, there usually is one national association that represents librarians from university, public, special and school libraries. A few are large enough to have specialised sections of school and special librarians, but these usually form an integral section of the national library association. Jamaica is one of the few small countries (Area 10,991 sq. km) that has a second library association - *Association of Librarians of the Jamaica Library Service* (ALJALS) - an association of public librarians formed to negotiate for the welfare of the librarians employed by the Jamaica Library Service as an institution. Mauritius is another example where in addition to the Mauritius Library Association, which has traditionally been regarded as the national association, there is also a second library association - the *Association of Professional Librarians of Mauritius* which was founded in 1992. Under normal circumstances, one would establish links with a national association. Where there is more than one association in a country however, it is politic to understand the role of each before formalising contemplated external twinning agreements.

KEY REQUIREMENTS FOR SUCCESS

- ✓ Knowing unambiguously what your goals or objectives are and what to expect from the twinning relationship.

- ✓ Finding a partner whose needs correspond to some extent with what you can offer (This is often the most challenging part).

- ✓ Selecting the right (committed, enthusiastic) person to spearhead the team effort, monitor and execute terms of the agreement.

- ✓ Identifying at the outset what possible resources are available on both sides.

- ✓ Being flexible on both sides with each partner willing to make adjustments according to the need.

- ✓ Providing opportunities for cross-cultural visits/attachments.

- ✓ Assisting in seeking funds, where there is no access to resources to facilitate collaboration to effect critical components of any agreed on programme.

- ✓ Persisting under any set of circumstances, to give the agreement a chance to work and to be worked at.

From the situations I have described earlier, the odds would seem to be weighted in favour of north-south partnerships, which tend to be between developed and developing, between the resource rich and the resource poor, between the North and the South. I believe however that there can also be partnerships between East and West, North and North, South and South as long as these involve reaching out to satisfy a need and improving the quality of service. In some cases, south -south partnerships may even be quite beneficial, because common bonds of culture, history, language, and socio-economic development levels, may already exist. Development patterns of associations may also be similar and valuable exchanges of problems and solutions can take place. In many of our countries, however, there is a perception that the impoverished have nothing much to offer or exchange with the impoverished and scant interest is demonstrated in such liaisons, which is unfortunate.

For example, in November last year, I had the occasion to address the Pacific Islands Archives and Library Association (PIALA) annual conference in my capacity as representative of both COMLA and the RTMLA. It could probably be argued that by virtue of numbers and longer association life, there are many areas in which PIALA could learn from the Caribbean, but in my opinion, the Caribbean could certainly learn much from the effectiveness of information exchange through the PIALA list-serve. Again, no formal twinning arrangement exists between the Library and Information Association of South Africa (LIASA) and ACURIL (Association of Caribbean University Research and Institutional Libraries but because of relationships established by the COMLA President in her visits to South Africa, a group of the Library and Information Association of South Africa(LIASA) members will, at her invitation and their expense, be attending the ACURIL 2002 Conference in Jamaica. This will provide an unparalleled opportunity for some 40 associations from the south to exchange ideas in many areas. Distance and travel funds appear to be major obstacles, and for this there needs to be an independently established fund from which associations not having resources, could be assisted from time to time to further the objectives of association twinning.

WHAT ARE THE RESPONSIBILITIES OF SMALL ASSOCIATIONS?

In any prospective twinning partnership, small associations have a responsibility to poise themselves to participate meaningfully in the relationship. Twinning works better where there is a properly constituted professional body with which partners can interact reliably and on a sustained basis. Regular meetings of executives must be held to take decisions and execute commitments, and reliable communication systems need to put in place in the form of a permanent postal or email addresses, fax or telephone numbers, to facilitate communication between partners. Some promotion of the benefits that can accrue from such partnerships must be done within and beyond associations to enlist support and active participation from members and from communities. Members have to be convinced that this particular initiative will be rewarding to their association, to the country and to themselves as professionals.

One must appear to be responsive and committed if positive results are desired. A few years ago COMLA approached the Association of Assistant Librarians in the UK (now the Research Development Group of the LA) to seek its assistance in paying subscription fees for some COMLA members who were in arrears, and it generously agreed to do so. The respective associations were then asked to contact the donors directly. I believe one of the associations did and nothing was heard from the others. If one does not grasp opportunities that present themselves, one cannot then, in fairness, blame the failure of a relationship on anyone but oneself. Partnerships need to be worked at from their inception if these are about building relationships.

THE ROLE OF LARGE NATIONAL ASSOCIATIONS

Large national associations have an important role to play in the development and empowerment of smaller national associations. Of the 137 national association members of IFLA, there are a few which by virtue of their numerical and resource strength, are able to have international programmes independently of those of international associations like IFLA. The ALA, the Library Association, UK, Danish Library Association, Swedish Library Association, Norwegian library Association, Special Libraries Association and the Dutch Library Association are a few that come to mind. Many of these associations have contributed much through the years not only to the development of the profession outside their borders but also to that of associations by making their knowledge expertise and goodwill available. They have spoken out, often tangibly for the case of improving the information access situation in developing countries. The latest initiative by the Swedish Library Association[7] to provide funding for RTMLA Executive Committee members from developing countries to attend meetings and to pay IFLA fees for PIALA is typical of the outreach activities of some of these associations.

One way in which large associations can have the greatest impact is in empowering small association leadership. They could assist such associations to " develop effective library programmes and services that meet the needs of library users and advance societal objectives and interests, ensuring public access to information, preserving and protecting cultural resources." [8] There are many ways in which this assistance can manifest itself. These include training and skills development, supportive advocacy and lobbying on social and professional issues e.g. literacy, freedom of access to information, improving connectivity to the internet or in practical donation of computer hardware and software where that will make a difference to the capacity of an association.

THE ROLE OF THE RTMLA

As the IFLA Round Table responsible for the Management of Library Associations, RTMLA has a special interest in activities designed to improve associations' offerings world-wide in IFLA member countries. The first goal in its Medium Term programme, 1998-2001 seeks to "encourage library associations to provide leadership in addressing important social issues such as open access to information, rights of users, freedom of expression, management of intellectual property, and copyright matters." Twinning offers an opportunity for greater capacity building in associations, and for broadening horizons and outlook on both sides and the above should be pursued more actively. Among the activities RTMLA could consider are the following:

- ✓ Encouraging RTMLA Executive Committee members whose substantive positions involve travelling overseas to establish links with National Associations /Regional Associations and offer their expertise in the form of lectures, talks, workshops on the issues of the profession. This has been done in Jamaica and can be repeated elsewhere(Appendix 1+2)

- ✓ Establishing a presence independently or jointly with larger national associations at regional library association conferences in Africa, Americas and the Caribbean, Asia, Europe, and the South Pacific. This could take the form of participating in exhibitions, conducting workshops, presenting papers, as the international networking opportunity provided on such an occasion is often the only one for some professionals.

- ✓ Maintaining a directory of twinned library and information associations. This will be very useful in reducing duplication of effort and in guiding those who need some guidance.

- ✓ Establishing a "Small Library Association Development Fund," which offers some funding support to twinning initiatives especially in situations where such funding is likely to make a critical difference between success and failure.

- ✓ Collaborating with larger national associations that have international arms or agendas as well as with other international associations to minimise duplication of effort and allow for a greater spread of benefits within IFLA member countries.

- ✓ Lending support to CE and DE efforts globally where these involve the development of association leadership.

CONCLUSION

There is a positive perception of and general support for the idea of twinning by small associations. The recorded success stories of the Sister Libraries and the instances of success recorded in the literature by individual libraries and networks indicate that twinning can and does work. The lack of success in some instances even when apparently suitable matches have been made suggest that some of the difficulties are not easily overcome or can only be overcome with outside assistance. Small associations are cognisant of the benefits they can obtain from these relationships and know what they are able to offer in return but as the Jerusalem summary report concludes, it is not always easy to put the ideas of twinning into practice.

There are many challenges that arise because of underdeveloped economies, lack of resources, lack of adequate information infrastructure, small numerical memberships, lack of volunteers. Some appear formidable indeed but, with enthusiasm and understanding and a willingness to work at sharing and succeeding, much progress can be made. The potential of library association twinning therefore needs to be much more fully explored.

I believe my presentation would be incomplete without mentioning that I am passing on to the RTMLA data received from participants in my survey. The document assembles details of responses received and provides a list of associations wanting to participate in a twinning arrangement together with their email addresses, fax and phone numbers and preferred countries for further contact if desired. I suggest a start be made with association to association pilot projects in each of the IFLA regions. From these pilot projects, much can be learned for setting up a best practice model.

rom around Jamaica to attend what was termed a *Professional Development Seminar on Advocacy* and charged fees that would help offset expenses. Both the local profession and the RTMLA agreed that the meeting exceeded expectations. Several benefits were obtained among them the fact that the president of the local association was invited to be an observer at the RTMLA meeting. Most importantly though, it was the start of a good relationship. It generated income and though not formally dubbed a twinning partnership by the library associations involved, it could in fact be termed as the start of one. The point I wish to emphasise is that loose informal, ad hoc relationships are a good launching point for more formal twinning agreements. For one, these provide some insight into an association's capacity and help in determining the levels at which twinning relationships between library associations would be meaningful.

APPENDIX

List of Associations Surveyed

1. Botswana Library Association (BLA)
2. Kenya Library Association (KLA)
3. Lesotho Library Association (LLA)
4. Malawi Library Association (MALA)
5. Mauritius Library Association (MLA)
6. Swaziland Library Association (SWALA)
7. Zambia Library Association *
8. Zimbabwe Library Association (ZLA)
9. Gambia Library and Information Services Association (GAMLISA)

10. Ghana Library Association (GLA)
11. Sierra Leone Association of Archivists and Information Scientists (SLAALIS)
12. Library Association of Barbados (LAB)
13. Belize Library Association *
14. Library Association of Bermuda (LAB)
15. Grenada Library Association (GLA)
16. Guyana Library Association (GLA)
17. Library and Information Association of Jamaica (LIAJA)
18. Library Association of Trinidad & Tobago (LATT)
19. Library Association of Bangladesh *
20. Brunei Library Association *
21. Sri Lanka Library Association *
22. Cyprus Association of Professional Librarians *
23. Malta Library and Information Association (MaLIA)
24. Cook Islands National Library[1]
25. Fiji Library Association (FLA)
26. Papua New Guinea Library Association (PNGLA)

* *No response received.*

ENDNOTES

[1] Initiative of Sarah Long, 1999 president of the ALA which is based on the notion that if libraries partner across borders, everyone can benefit and learn from each other. The ALA partners with The US National Commission on Library and Information Service and Sister Cities International in this program.

[2] An international twinning database developed and maintained by the IFLA Programme for Universal Availability of Publications (UAP) between 1996 and for libraries seeking prospective partners. The database has since closed down.

[3] The workshop, "Links Between Libraries: Twinning, Networking and Partnerships" , was organised by the IFLA Core Programme for UAP and the IFLA Round Table on Continuing Professional Education during the IFLA General Conference in Jerusalem, 13th August 2000.

[4] The American Library Association has collaborated with the organisers of the Zimbabwe International Book Fair (ZIBF) to provide support for American Librarians to attend the ZIBF fairs since 2000.

[5] Survey of National Associations by Norma Amenu-Kpodo and Michael Wooliscroft done in 1997 for IFLA/RTMLA.

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[1] No Library Association exists. In COMLA, Public or National Libraries are asked to act on behalf of an association until one is formed.

[6] The Group first met in Copenhagen in 1997 and its main priority was to address the growing gap between the information rich and the information poor both between countries and within countries. Recommendation 10 refers to associations and their addressing of the information gap issues.

[7] The Swedish Library Association is funding a one-year IFLA membership for The Pacific Islands Library and Archives Association (PIALA) as well as the participation of an officer of IFLA Roundtable for the Management of Library Associations who is unable to financially support attendance at the RTMLA meetings.

[8] Refers to the list of professional priorities adopted by IFLA Professional Board in 2001.

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APPENDIX 1

CASE STUDY 1

RTMLA/Commonwealth Library Association/Library and Information Association of Jamaica (LIAJA)[8]

In 1998 through my association with the RTMLA, I discovered that Dr. David Bender, then Executive Director, Special Libraries Association, and RTMLA chair was a regular visitor to Jamaica. At my request, he agreed to address the national association on one of his visits. COMLA and LIAJA used this opportunity to organise a three-day **Seminar on Special Libraries in the Caribbean on the Threshold of the New Millennium** to which representatives from other countries in the Caribbean were invited. The event provided a good continuing education opportunity for professionals in the English Speaking Caribbean. From registration fees, COMLA and LIAJA could easily pay for hotel accommodation and obtain extra funds to help develop both associations. The high media publicity and visibility given to a foreign visiting librarian of his stature, also gave a boost to the local profession. From the proceeds of the seminar, a bursary was given to the Department of Library and Information Studies at the University of the West Indies, Mona Campus, to be awarded to the best student in special librarianship. A paperback version of selected papers from that seminar is about to be published. This should be an added benefit for the local profession.

The links between the national library association LIAJA, the Commonwealth Library Association and the SLA organisations were also beneficial for SLA. SLA developed visibility in a new area (which of course is of interest to Associations with chapters) and was provided a promotional opportunity to make the local profession aware through the material Dr Bender provided, of the kind of services larger associations provide for their membership. Another interesting outcome was the large number of requests that were received after the conference for annual or biennial conferences of this nature. Librarians were willing to include it as an item in their budgets! Unfortunately neither association could undertake the challenge of setting up such a conference on a two year basis but these are the kind of opportunities that present themselves and are not exploited. In such cases, collaboration with a large national associations could result in an enriching experience. Another important benefit for the local profession was that for the first time many Librarians were introduced to the document *Competencies for Special Librarians of the 21st Century*. The RTMLA also benefited indirectly from the hands on experience provided by its involvement with local member associations.

Case Study 2

RTMLA MID-YEAR EXECUTIVE MEETING, FEBRUARY 2000

In February 2000, the RTMLA held its mid-year meeting in Jamaica. This was a landmark event because since its formation between 1982 and 1984, the RTMLA meetings had never been held in a developing country. For one, many of the subsidies that could be offered by the developed countries to facilitate the meeting could not be offered by Jamaica. Both COMLA and the Library and Information Association of Jamaica had little or no funds to host the meeting. The only immediate advantage that someone from the developed world could foresee, was the lure of a few days in the tropical sun by the beach in the midst of winter. With a little negotiation, the RTMLA decided to forego some of the advantages of a first world location. The desire to have the meeting in Jamaica at all costs, fuelled local enthusiasm. Air fares and hotel accommodations were paid for by the RTMLA Executive Committee members themselves. Jamaica offered in return good social and cultural programmes, good meeting facilities at no cost to the group.

To solve the problems that would arise because of lack of funds, the two associations asked the RTMLA Officers to meet with members of the local association and participate in a panel discussion on Advocacy. COMLA and LIAJA invited librarians from around Jamaica to attend what was termed a *Professional Development Seminar on Advocacy* and charged fees that would help offset expenses. Both the local profession and the RTMLA agreed that the meeting exceeded expectations. Several benefits were obtained among them the fact that the president of the local association was invited to be an observer at the RTMLA meeting. Most importantly though, it was the start of a good relationship. It generated income and though not formally dubbed a twinning partnership by the library associations involved, it could in fact be termed as the start of one. The point I wish to emphasise is that loose informal, ad hoc relationships are a good launching point for more formal twinning agreements. For one, these provide some insight into an association's capacity and help in determining the levels at which twinning relationships between library associations would be meaningful.

APPENDIX 2

List of Associations Surveyed

1. Botswana Library Association (BLA)
2. Kenya Library Association (KLA)
3. Lesotho Library Association (LLA)
4. Malawi Library Association (MALA)
6. Mauritius Library Association (MLA)
7. Swaziland Library Association (SWALA)
8. Zambia Library Association *
9. Zimbabwe Library Association (ZLA)
10. Gambia Library and Information Services Association (GAMLISA)
11. Ghana Library Association (GLA)
12. Sierra Leone Association of Archivists and Information Scientists (SLAALIS)
13. Library Association of Barbados (LAB)
14. Belize Library Association *
15. Library Association of Bermuda (LAB)
16. Grenada Library Association (GLA)
17. Guyana Library Association (GLA)
18. Library and Information Association of Jamaica (LIAJA)
19. Library Association of Trinidad & Tobago (LATT)
20. Library Association of Bangladesh *
21. Brunei Library Association *
22. Sri Lanka Library Association *
23. Cyprus Association of Professional Librarians *
24. Malta Library and Information Association (MaLIA)
25. Cook Islands National Library[8]
26. Fiji Library Association (FLA)
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* No response received

67th IFLA Council and General Conference
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Joint Meeting with:	-
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Simultaneous Interpretation:	-

Evaluating Digital Resources in an Academic Consortium – from Theory to Practice

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Abstract:

Analysis of usage information relating to digital bibliographic and full text resources provides libraries with important new criteria for evaluating the effectiveness of the services they provide, including their ongoing and retention value. Collection and analysis of this data in a consortium framework can provide also comparative data on member institutions with library, academic and administrative implications. The principles and problems of collecting and evaluating this information are presented with examples from the Israeli MALMAD academic library consortium.

Introduction

One of the most significant developments resulting from the increasing migration from print to digital library resources is the ability to receive detailed information on the actual use of services and resources. This data, properly evaluated, should be able to lead to decisions on renewal of subscriptions, renegotiating their costs, need for further training, marketing, etc. While this is true for all digital library situations, it creates particular challenges in a consortium framework. This paper will deal with the potentials and challenges in evaluating the use of digital resources both in principle and in practice in the framework of an academic library consortium, the Israeli MALMAD consortium.

The MALMAD Consortium and its Services

MALMAD - the Israel Center for Digital Information Services was set up in 1998 to serve as a common framework of the eight Israeli research universities. The creation of MALMAD follows several earlier cooperative steps between the Israeli university libraries (for an overview of MALMAD and its administrative framework, see: Adler, 1999). While 1998 was a 'pilot' year in which only three services were provided, beginning in 1999 a large and diverse package of services have been provided (in 2001: 19 services from a common budget of $1,500,000, plus another 18 optional services at additional cost of close to $1,000,000). For many of these services several years of usage data is now available, and potential users are by now, hopefully, aware of them, so the time is ripe to evaluate these services in terms of their contribution to the academic community and their cost-efficiency.

Collection of Usage Data

The initial problem encountered by all institutions is the vast differences between the data supplied by various services. Despite the ICOLC Guidelines for Statistical Measures (International Coalition of Library Consortia, 1998) data is provided in a wide variety of levels of detail. While most e-journal suppliers do provide article 'download' counts which provide a fairly common denominator, few break them down by journal title (crucial to knowing whether the whole is indeed worth more than its parts). For bibliographic services there seems to be even less standardization, and the data received ranging from 'sessions' to 'searches' to 'accesses' which makes comparison of different services virtually impossible. Over the last three years we have seen several suppliers change their statistical systems, making multi-year comparisons difficult if not impossible. One major journal publisher only recently began supplying usage figures and for two services we are still awaiting any data at all. While consistent figures from the same service can indicate the ongoing level of use of that service, they are often not usable for comparison between services.

Just as the data itself differs between suppliers, so does its format and the steps needed to retrieve it. Data arrives in the form of spreadsheets, html pages, plain ASCII files and even hard copy printouts. Some suppliers have online statistics generators while others either 'push' the reports to the libraries or post them to a web site for collection. Some need to be prodded regularly to supply the needed data.

In a consortium framework the collection and maintenance of this data becomes much more complicated. While some suppliers seem to be aware of the fact that consortia do wish to receive data for all their member institutions, others are set up for individual institutions only. The consortium often needs to maintain lists of usernames and passwords for each institution's statistics in order to collect them one-by-one. At MALMAD, data is collected regularly from all suppliers and maintained in a series of EXCEL files. These files are subsequently used to produce an annual statistical report as well as on-demand statistics.

Many services do allow individual member institutions to access their own statistics. Our experience at MALMAD has been that most institutions do not avail themselves of this capability and depend on the consortium's data collection. When specific figures are needed, they will usually request them from the consortium rather than compile them themselves.

Confidentiality of Data

Individual institutions are often sensitive regarding sharing or comparing their usage figures with others. In the framework of a consortium it is, I believe, accepted that the consortium must maintain and provide comparative usage figures for the various services. At MALMAD, the above mentioned annual report is circulated amongst the member universities but not outside the consortium. Aside from professional interest, since the MALMAD institutional usage figures are used in apportioning each institutions share of the budget, the data must be openly available to all.

Evaluation of Usage Data

Usage data received as above can be processed and used to answer a wide variety of questions:

To what degree are digital services being used? At MALMAD, the fact that we could show an increase in the total number of articles downloaded (all services) from 234,000 in 1999 to 643,000 in 2000 was an important factor in achieving an acquisition budget increase in 2001.

How does actual use of specific services by individual member institutions compare to potential use? For this comparison it is necessary to provide data on the size of the user community in the relevant fields. At MALMAD this is done to allow members to locate and evaluate areas of weakness in their local communities (or in their marketing and training efforts). No less important - both potential and actual use are factors in apportioning the MALMAD budget between members.

How many institutions are making significant use of a service? If only a small number, then the subscription cost may need to be adjusted (unless already set accordingly). At MALMAD we have usually factored this into the initial price so that, for example, legal services are not only priced according to the number of law students in the consortium institutions, but the cost of such a service (in the overall budget calculation) falls primarily upon those institutions.

How cost-effective are various services? Comparing usage of specific services per unit (article downloaded, search session, other) both for the same service over a period of time, and in comparison with other similar services. Of course, "similar" in this context may be hard to define and e-journals, just like print journals, have a wide span of prices. "Rented" journals in aggregator databases can also not be compared with permanent-access volumes purchased from a publisher, and the price of a volume purchased cannot be evaluated according to its use in a single year (in any event, very few suppliers provide usage statistics broken down by volume or year). At MALMAD we have produced some evaluations of services based on price-per-unit. Initial analysis indicates that some very expensive services seem reasonably priced when reduced to their per-unit cost, while the limited use of some moderately priced services does not seem to justify their cost. In the latter case the consortium may decide to either drop a service or to renegotiate its cost from a position of strength.

The above questions are of prime interest to both consortium and members. Usage data often includes information which is, however, of interest primarily to the specific institution: articles most frequently retrieved, time of day of activity, etc. While an institution may use such data to improve their internal marketing or helpdesk staffing, at the consortium level this data is often irrelevant.

What Don't Usage Statistics Tell Us?

Usage statistics can tell us quantitatively how many transactions are taking place. These can then be compared with those of previous months to indicate increase or decrease in use. They can also, if compatible, be compared with those of other services to indicate relative use and cost-per-transaction. However, they do not usually provide numbers of unique users (in the MALMAD case, because of the universal use of proxy servers an entire institution appears as one or two IP numbers). Furthermore they do not in any way indicate the gap between potential use and actual use – a 100% increase in use of a service may indicate that the active user group has increased from 40% of potential users to 80%, or only from 10% to 20%. It could also indicate increased use by the same number of persons.

In order to attempt to evaluate these factors, MALMAD has supported a research project of several faculty members at the Hebrew University of Jerusalem's School of Library, Archive and Information Studies. This project is based on questionnaires sent to a large sample of faculty members at seven of the eight MALMAD universities (one refused to cooperate in the name of privacy). The questionnaires examined the awareness, use and importance of digital resources to the faculty members in their teaching and research activities. Preliminary results of this survey should be available during Summer 2001.

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Simultaneous Interpretation:	-

Use of Electronic Journals in OhioLINK'S Electronic Journal Center

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Abstract:

With electronic desktop delivery to information, increased ease of access allows far greater information use than previously possible. The OhioLINK experience thus far is that improved ease of access has demonstrates the high elasticity in information usage. The first thirty-six months of operation of the OhioLINK Electronic Journal Center (EJC) is an exemplary illustration of the dramatic benefits of expanded access. Small and two-year colleges are also beneficiaries through first-time access to scholarly journals. The evolving and maturing usage analysis that is made possible with an electronic journal system will provide the basis for making rational, value-based decisions about electronic journal needs.

Introduction

The OhioLINK experience continues to strongly support an adoption of the new journal purchasing practices based on consortium-level licensing and access to expanded electronic collections. We can overcome the inherent limitations of the print medium, the entrenched and limiting economic practices of vendors to individual institutions, and the library-imposed, self-limiting, collection development mentality of information rationing that pervades our community. By radically changing the value equation of information delivered per dollar spent, consortia can set the evolution of our industry on a new and better, long-term course.

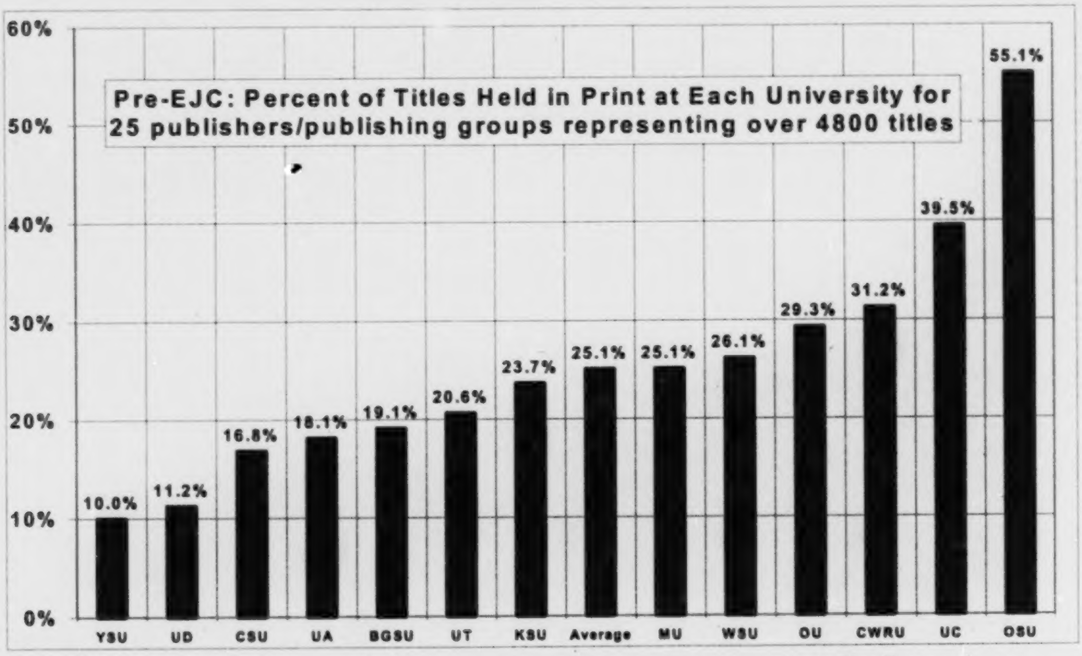
Critics claim we are doing no more than rewarding publishers who have gouged libraries with exorbitant price increases over the years. That we are buying large pre-set packages of journals that no one needs. That we are becoming more dependent on these publishers and their journals through these deals. That while what we are doing feels good in the short term, we are failing to do the right thing for the long term good of libraries and scholarly publishing.

Critics assume incorrectly that what we are doing today is an end state scenario. They fail to see the long term advantages these licenses provide in assessing what materials are really useful, what the true cost per use may be, an in negotiating economically sustainable, long term access to a wider array of useful and needed journals. This paper will continue to portray that these licenses are a positive evolutionary step for the library community in evaluating need and utility for library users.

For purposes of this paper I will focus on the measurement and evaluation of use of electronic journals rather than on the rational for group licensing. The latter can be found in other papers by the author. Suffice it to say, for Ohio universities, the traditional, individual library journal purchases has created a deteriorating world of individual collections whose trends follow the pattern repeated by ARL members and others; bigger budgets, reduced buying power, fewer books bought each year, fewer journal subscriptions. To illustrate, consider the holdings of 4,824 journal titles from twenty-five important commercial and society publishers and publisher groups whose electronic journals Ohio academic libraries were interested in licensing.

Chart 1 shows the percentage of the 4,824 titles owned in print by each library. Ten of the thirteen libraries hold fewer than 30% of the titles. Only Ohio State University holds more than half of the titles in print, but barely, with 55.1% ownership. At the low end of the range, Youngstown State University holds only 10.0%. Given these statistics, is it really possible that the collective academic interests of the state justify the collection of, on average, only 25.1% of these published titles?

CHART 1



In response, the OhioLINK community has accepted several new operating rules. The first, and most fundamental, new rule is that the need for and use of information is highly elastic as access is improved with the rapidly evolving advances in electronic technology. This elasticity holds true for both print and electronically delivered information. In an evolving arena we can be, at best, only partially correct in our decisions for selecting material, and must realize that information is being used in an evolving, expanded, and as yet not totally definable dynamic new way. To achieve effective practices we must focus on enabling this expanded access rather than trying to precisely define it. The change in mentality from "I know what my users need" to "Let's find out what my users need" is the cornerstone to the new rules.

A second new rule is that the economics of group purchase are far superior to the old rule of the individual library as an economic island. The past pricing practices of vendors and publishers to individual libraries have been translated to electronic media in ways that allow for only a modest expansion in information resources. Consortium purchasing can enhance vendor revenues and profits while lowering the library unit cost of purchase. Many consortia have experienced this phenomenon, saving anywhere from 20% to 70% when buying as a group compared to accrued individual library prices. OhioLINK has executed group purchases as extensively as any consortium, and as a result we can claim to the State of Ohio administration that rather than additional investments in our libraries resulting in less efficiency, the opposite is now true. The unit cost of information is going down, and now for each dollar spent more information is bought and delivered. This argument provides an enhanced basis for future success and funding.

The third new rule is that the focus must be on information expansion and cost effectiveness. Rationing information in a way that is more cost efficient is a survival tactic but not a strategic approach for success. In general, the experience learned from the information licensing conducted by OhioLINK is that we should look carefully at what individual libraries will spend to maintain their current and scattered resources, and compare that cost against what it will take to achieve expanded group-wide access. OhioLINK has found that in many cases only a small increment in spending is needed to achieve expanded group-wide access. Even where a large increment is needed, the expanded access often results in a much better value. The remainder of this article will focus on the expanded use of information that results when the new rules are applied.

THE OHIOLINK ELECTRONIC JOURNAL CENTER EXPERIENCE

The OhioLINK Electronic Journal Center (EJC) is a tool created to improve dramatically our use of scholarly journals beyond the use of print journals. The EJC is an OhioLINK operated software and hardware site designed to aggregate the electronic journals licensed from multiple publishers. It is accessed directly with title and subject category menus or traditional search form options. There are URL links to the EJC from our local and central catalogs, from our locally mounted Institute for Scientific Information (ISI) *Web of Science*, and from 37 other journal citation databases mounted at our central site, such as Medline, BIOSIS, PsycINFO, INSPEC, MLA, Sociological Abstracts, and Compendex. For all titles of each publisher, all OhioLINK publicly supported universities and colleges, and 31 of the 38 member Ohio private liberal arts colleges have access.

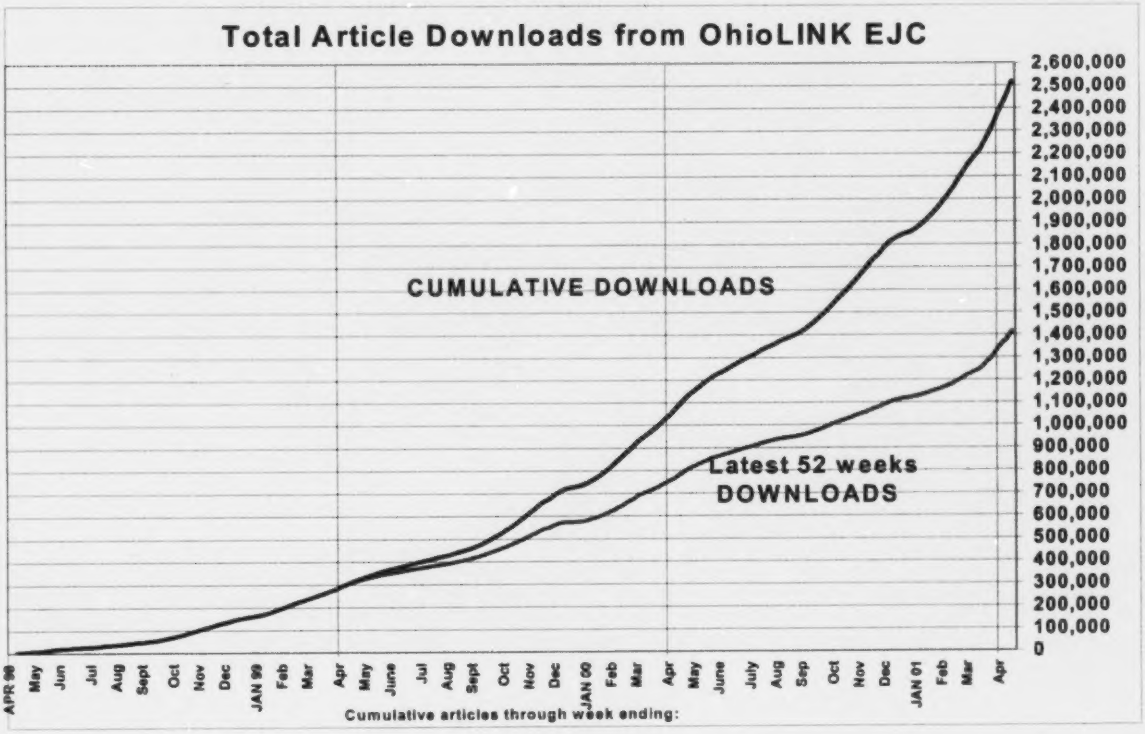
The EJC was launched in April 1998 with the available full collections of Elsevier Science (now +1300 ISSN's) and Academic Press (now +200 ISSN's). Project MUSE titles were subsequently added in early 1999 and as available all the expanded MUSE titles (from 40 to now 135 ISSN's). Added in fall 1999 were the available collections of Wiley (+360 ISSN's), Kluwer (+600 ISSN's), Springer-Verlag (+400 ISSN's), and the American Physical Society (7 ISSN's). Spring 2000 saw MCB Press (150 ISSN's) and Royal Society of Chemistry (28 ISSN's) journals added. Over the summer of 2000 we added Institute of Physics (44 ISSN's), American Institute of Physics (31 ISSN's), and American Chemical Society (31 ISSN's). In early 2001 addition began of Thieme (31 ISSN's), Blackwell Publishers (+240 ISSN's), and Blackwell Science (+275 ISSN's). Association of Computing Machinery's Digital Library collection will be next. Negotiations continue with other interested publishers.

Print titles are still being added to the electronic collections of some publishers and regular additions and changes result in a dynamic and growing ISSN count. All discontinued ISSN's and their past issues stay in the EJC as well. Back files start at different points in time.

The EJC Experience:

As a result of expanded use and expanded titles, articles downloads have grown rapidly; during the initial 12 months of operation, April 1998-March 1999, users downloaded 280,000 articles; in the second 12 months of operation, April 1999-March 2000, 740,000; January 1999-July 2000, 1.1 million; and 1.4 million annually by mid-April 2001 (Chart 2).

CHART 2



Weekly article downloads (AD) started out at 2,000-3,000 per week during the spring and summer of 1998, and during the 1998-1999 academic year, AD grew rapidly to a weekly peak of 12,500 (Chart 3). In 1999-2000 we had reached a weekly peak of 30,100 and in spring 2000-2001, shortly before the writing of this paper, we reached a weekly peak of 70,000.

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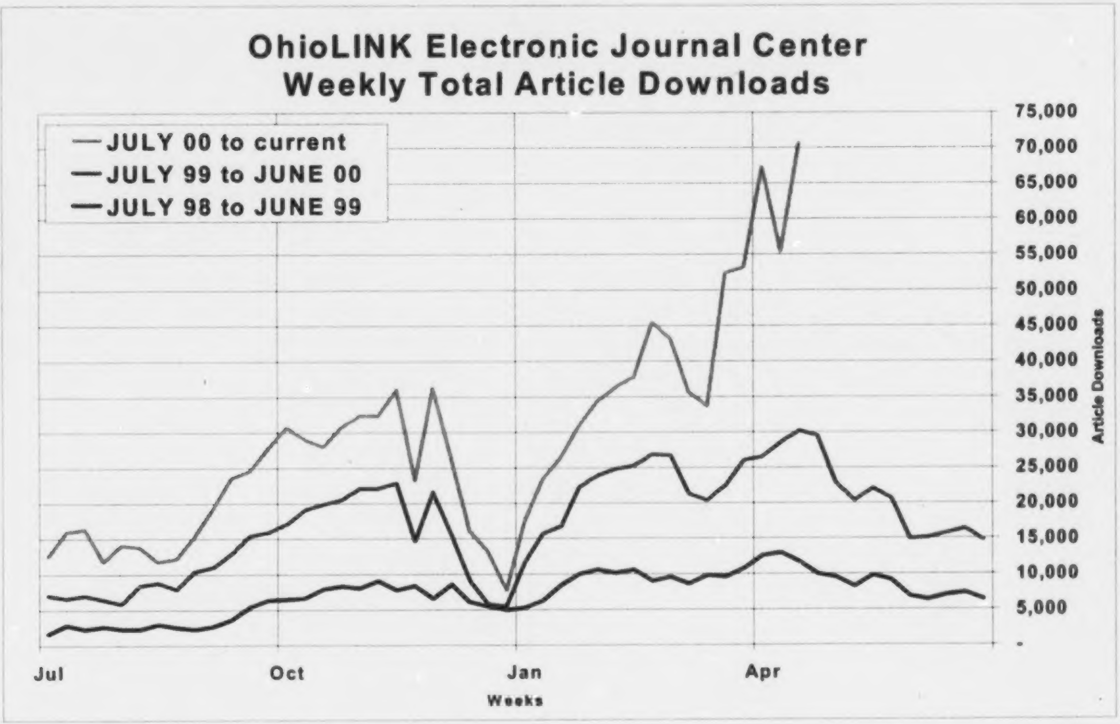
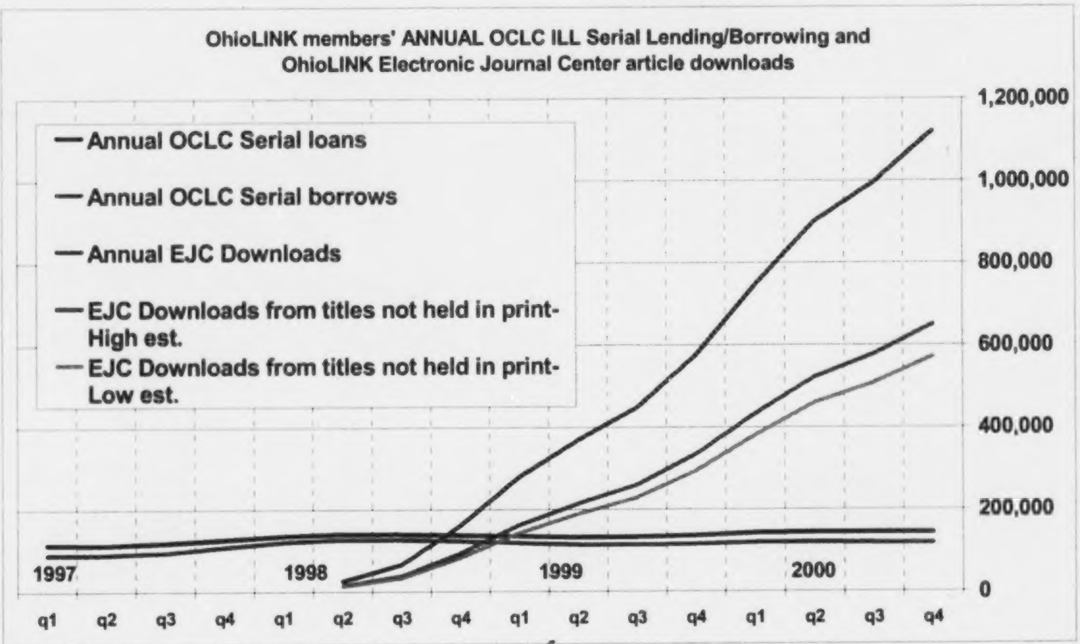
CHART 3



How do we evaluate the significance of these download levels? Chart 4 compares our EJC download levels for articles not held in print at the patron's home library to our OCLC ILL requests for non-returnable items.

CHART 4

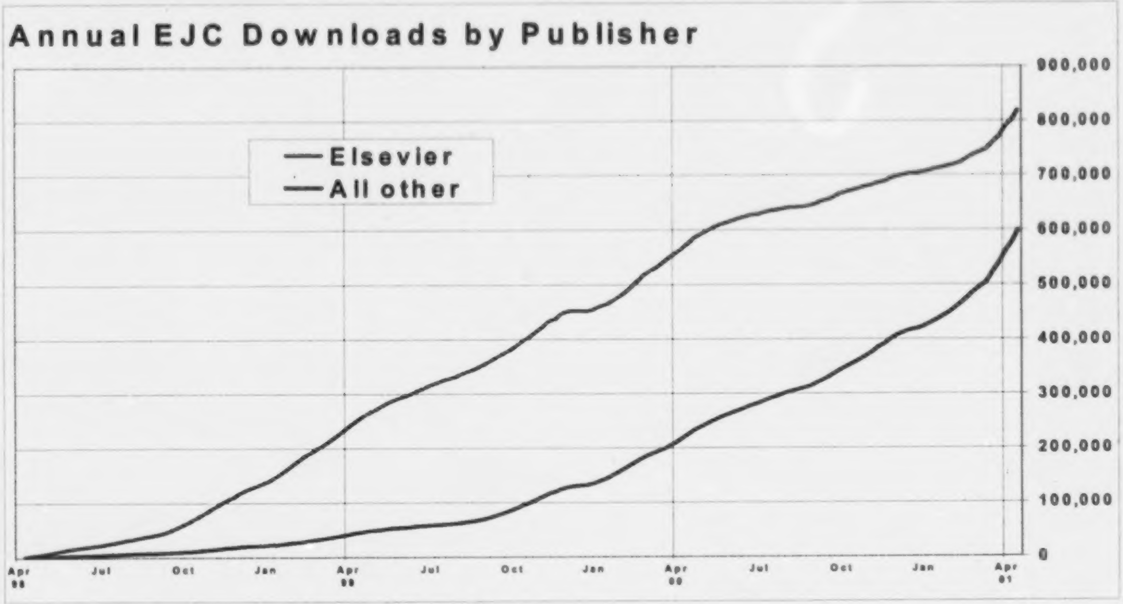


Of the 1,306,000 AD in the twelve months, April 2000 - March 2001, approximately 58% or 666,000 AD were from journals not held in print at the downloading patron's library. Universities average 52% with all smaller four year colleges and two year colleges above 90%, many approaching 100%. Traditionally, these articles would had to have been supplied via inter-library loan (ILL).

The number of articles downloaded from EJC journals, not held locally, greatly exceeds the number of ILL transactions among the OhioLINK community on OCLC, which are steady at about 120,000 requests per year. Only through immediate desktop delivery will users make use of journals at these expanded levels. This is even more impressive when one recognizes that the 666,000 articles were from just the limited EJC publishers available at the time. At this same time, we delivered almost 1,300,000 articles via ProQuest's ABI/INFORM and Periodical Abstracts and numerous other articles via Academic Universe and other databases. As OhioLINK expands to include additional publishers, undoubtedly the total AD will dwarf previous perceptions of journal use and need due in large part to ease and speed of desktop delivery.

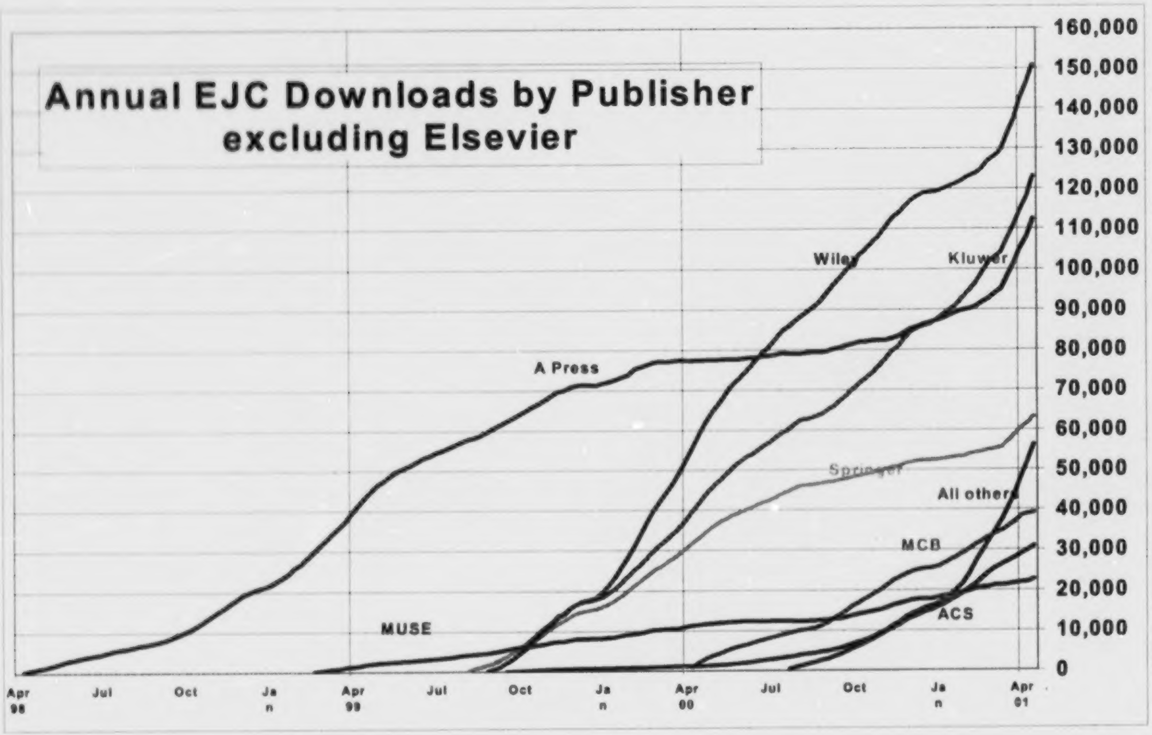
The EJC data also is very significant in its distribution among publishers. The introduction of additional major publishers and a more than doubling in the ISSN count has done little to arrest the growth in Elsevier Science downloads (Chart 5).

CHART 5



Downloads of Academic Press seemed to be affected by publisher additions, leveling off after the major expansion in titles in fall 1999 (Chart 6). Academic Press renewed growth in the current academic year after the addition of new back file years 1993-1995. Among new publishers Wiley has generated the most activity, 150,000 downloads annually, followed by Kluwer at 123,000, and Springer at only 63,000. The number of titles loaded would heavily favor Kluwer and Springer over Wiley. The difference in usage is also a reflection of the inherent demand as well as the number, currency, and completeness of articles delivered affects usage. Springer downloads have been negatively affected by its inability to deliver a complete back file and current content.

CHART 6



The "All Others" category is comprised of the publishers generating lesser activity levels. MCB Press is the leading publisher in this category with 39.000 downloads annually. We can expect both Blackwell groups to generate significant levels as they come online.

At this point we can observe that adding new titles is mostly, if not entirely, generating incremental, increased use. As we add linked bibliographies and enhanced searching options even more articles will be used. It may be some time before we see saturation in demand resulting in a broad cannibalization factor to develop.

At this early stage it is difficult to make equivalent comparisons of journal usage among publishers. Even if all titles are used, use relative to the number of articles in the EJC may be one such measure but only when there are significant and relative consistent back files. Currently there are significant differences in the average number of articles per title based on the extent of back files and journal frequency and articles per journal issue. These affect the aggregate rates of article downloads compared to total articles loaded for the major publishers for whom we have full calendar 2000 data.

As seen in Table 1 MUSE has the highest use at 74% above the average, followed closely by Wiley at 65% and Kluwer at 47%. Elsevier, Academic Press, and Springer-Verlag have rates of use below the average. Elsevier and Academic Press both have the most extensive back files and thus older, lower use articles could affect their use per article loaded. We have not yet conducted an analysis of use of articles downloaded by year of publication to verify this possibility. Springer-Verlag has had the most problems in supplying data and users have complained that this has negatively affected their reliance on the EJC.

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TABLE 1

	Article Downloads Calendar 2000	Articles Loaded in EJC	Number of Downloads per Loaded Article	Average AD per Loaded Art. indexed to Average
Academic Press	86715	178210	0.487	0.80
Elsevier Science	703486	1244345	0.565	0.93
Kluwer	86385	96713	0.893	**1.47**
MUSE	17767	16854	1.054	**1.74**
Springer-Verlag	52213	100842	0.518	0.85
Wiley	119031	118745	1.002	**1.65**
Total/Average	1065597	1755709	**0.607**	**1.00**

Additional insight can be gained by putting each publisher's downloaded titles in descending order of use and then by dividing each publisher's titles into ten equal groups, percentiles. In this way we can compare relative use levels across a publisher's collection and relative to other publishers. Table 2 provides this analysis. It lists the highest and lowest values of each percentile for each publisher. For example, Elsevier Science's top percentile of titles range from 8,669 to 1,237 downloads. The next percentile of titles ranges from 1,237 to 726, the next 728 to 487, and so forth. It reveals that Elsevier's (ES) heaviest used percentiles have download ranges greater than the comparable percentiles of the other publishers. Academic Press and Wiley show similar range profiles while Kluwer, Springer-Verlag, and MUSE have similar but still lower range profiles.

TABLE 2
Full Year -2000 Article Download ranges of Percentile Title Groups -descending AD per title

Percentile	ES	A Press	Wiley	Kluwer	Springer	MUSE
10	8,669	4,273	4,618	2,659	1,407	897
9	1,237	1,095	988	356	329	368
8	726	522	553	213	209	255
7	497	388	333	152	136	158
6	369	242	252	109	87	124
5	260	190	176	76	58	86
4	187	139	125	52	38	58
3	122	88	92	34	22	46
2	63	71	62	17	14	35
1	25	27	38	8	7	15
	1	1	1	1	1	3

Importantly, none of these analyses yet examines the per article downloading cost at the title level. This is a critical analysis that must be addressed. Without it our evaluation of use is incomplete.

Notwithstanding the differences across publishers in Table 2, there is a very consistent internal distribution of article downloads across titles within each publisher. One consistent phenomenon across publishers is that virtually all titles loaded are downloaded, even if many titles have only a few. Chart 7 reveals that for each major publisher about 40% of the titles account for about 85% of the AD. This ratio is broader than the 20/80 rule that some people have assumed. The basic distribution curve holds true for all 5 of the major commercial publishers with no significant differences. MUSE shows a slightly less concentrated distribution but only by 5%. On the extremes, the most heavily used titles, which represent 8-10% of AD, are only 1% of the total titles. The 45% least used titles deliver only about 8-10% of the AD. It is too early to predict which titles will permanently remain high or low AD titles. Patterns will likely continue to shift as we add publishers, improve our database links, and our users adapt to this new resource. And, of course, low use does not necessarily mean low value.

CHART 7

OhioLINK-WIDE DISTRIBUTION OF TITLE%-ARTICLE%
ACROSS 6 PUBLISHERS Calendar 2000

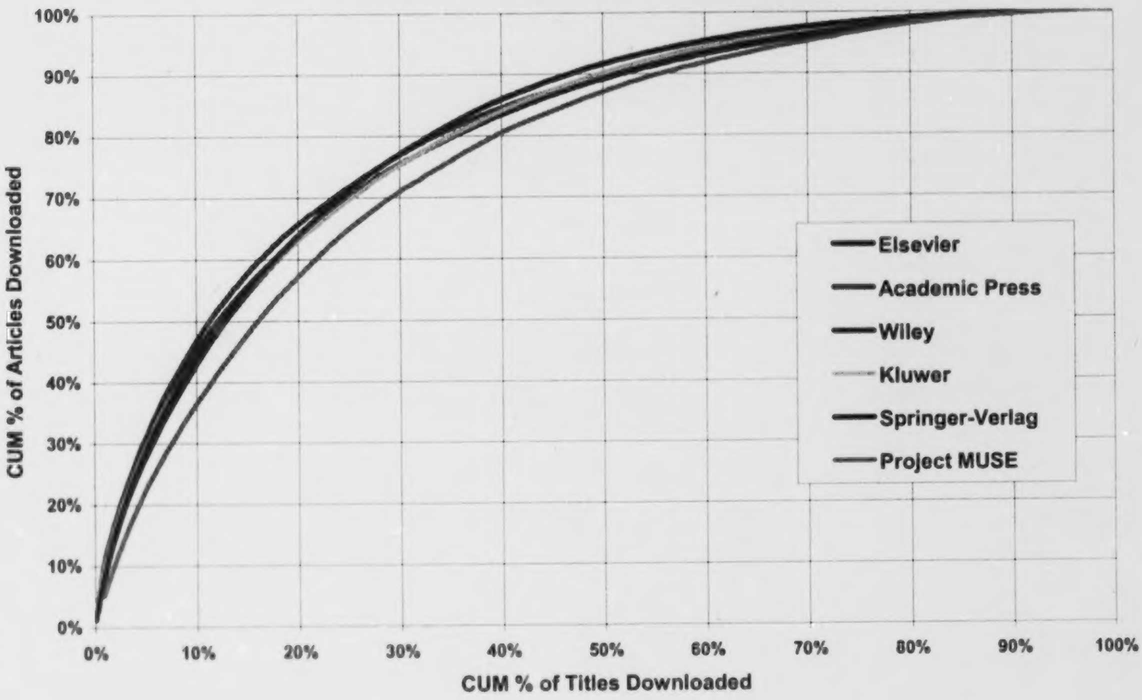
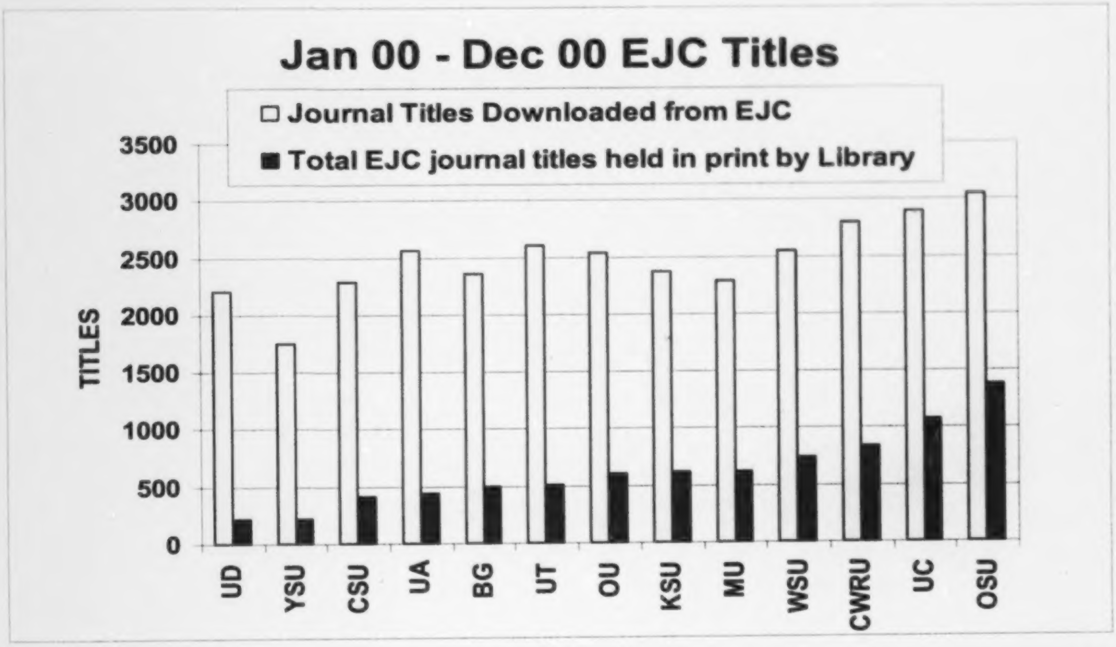


Chart 8 summarizes the dramatic expansion in journals used in our major universities when compared to the titles that were previously owned in print. On average, for the publishers available in 2000, each Ohio university owned in print 659 titles, based on the year prior to the start of each electronic license. In the twelve months from January 2000 – December 2000, patrons downloaded articles from an average 2,681 titles per university, a quadrupling in titles used over print access. The range of this phenomenon was widespread, from a low at Youngstown State of 1749 titles used to a high at Ohio State of 3,050. Even with 1376 of the EJC titles in print, the EJC more than doubled the title access at Ohio State.

CHART 8



At all campuses, including Ohio State, (Chart 9) the majority of titles with AD's are not held in print. This new access represented over two-thirds of the titles downloaded for all but the two largest libraries in the state, both of which are members of the Association of Research Libraries -- Ohio State University (OSU), and the University of Cincinnati (UC). The expansion in the number of titles used over those that were traditionally available in print is highly significant.

Chart 10 lists the total AD at each school and the average number of articles downloaded per title used. The averages are significant for all schools. Review of these statistics should cause one to speculate on the total cost if these articles had been ordered and received via traditional ILL or a commercial document delivery service. The obvious advantage of the EJC approach is that neither ILL nor document delivery are capable of providing the patron with immediate desktop access to the full-text of the articles.

CHART 9

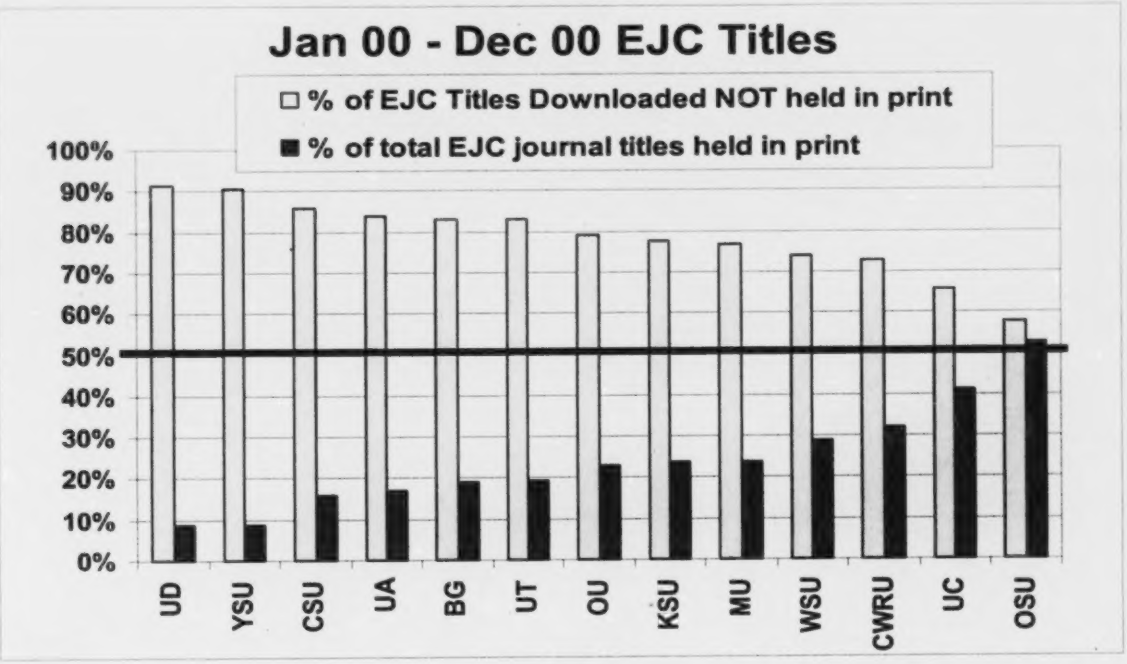
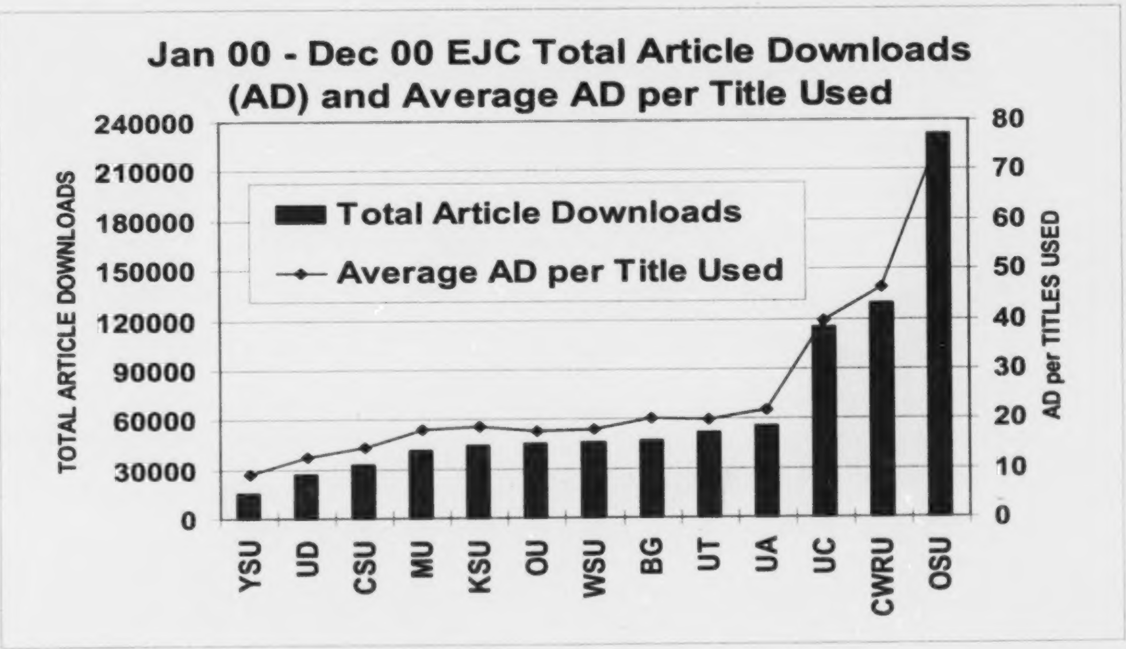
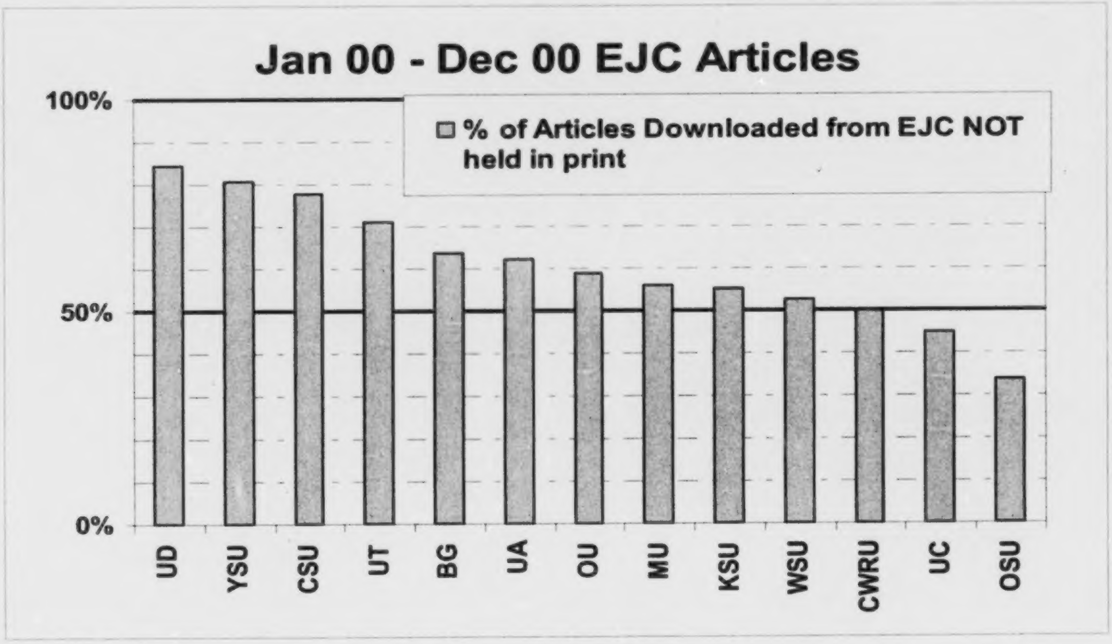


CHART 10



At all campuses except Ohio State, Case Western Reserve University, and the University of Cincinnati the percentage of articles from titles not held in print at the time license began represents a majority, with the average being 52% (Chart 11). A total of 476,370 articles were delivered to university patrons from the EJC that were not otherwise available on campus. It is obvious to conclude that the availability of all of the journal titles in electronic form creates vast new opportunities for access that patrons welcome.

CHART 11



The use of the EJC also as a convenience tool for titles held in print is obviously significant at 438,150. On a per title basis patrons use in heavier amounts the journals that they have had on campus in print. On each campus the AD per TD for titles held in print exceeds that of the AD per TD for titles not held in print. Ohio libraries in general were buying in print titles needed by their patrons, and electronic access creates an even greater tendency for those titles to be used. Over time this is not just a convenience, but a necessity as libraries begin to cancel print copies.

As the EJC has expanded publishers, and as patrons have adopted use of the EJC, the growth in EJC usage has been consistent across all universities. Charts 12 and 13 illustrate that over the past two years the growth in annual AD has been universal at all universities.

CHART 12

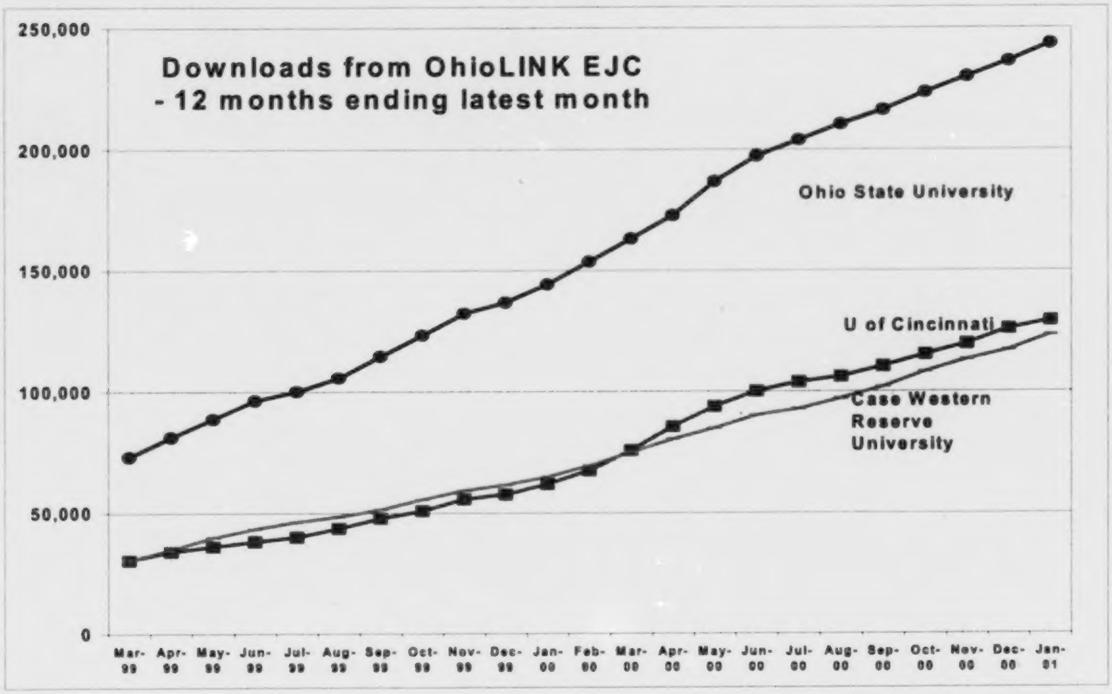
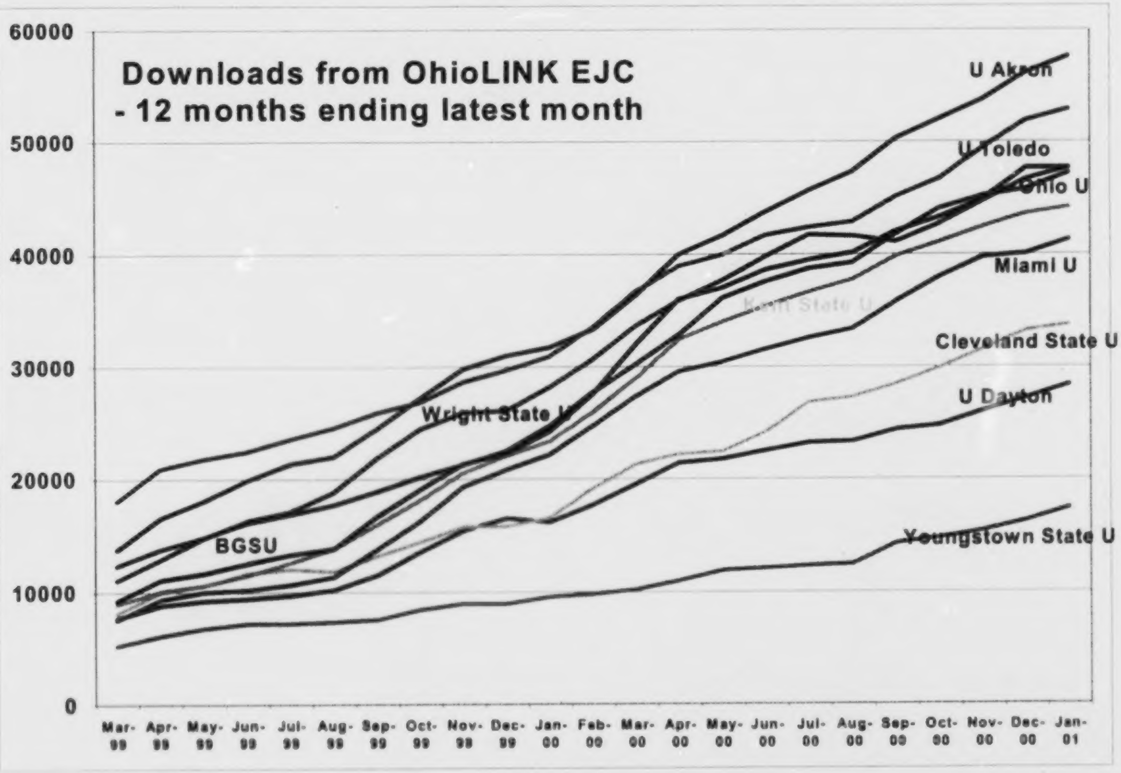


CHART 13



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Effect on Smaller Institutions - Tables 3 and 4

The EJC has had similar beneficial effects at smaller institutions in Ohio, such as small public and private four-year liberal arts colleges and universities and public two-year community and technical colleges. During the past year, 17 two-year colleges and 32 small four-year universities and colleges had EJC access.

TABLE 3
Two -Year College Print and EJC Use
January 2000 – December 2000

	TITLES USED	ARTICLES DOWNLOADED		TITLES USED	ARTICLES DOWNLOADED
No EJC titles in print			Fewer than 5 EJC titles in print		
Hocking CC	125	285	Belmont CC	136	220
Jefferson CC	74	119	Cincinnati State T&CC	111	215
Southern State CC	802	2735	Clark State CC	320	765
Terra CC	60	125	Edison State CC	132	235
Washington State CC	274	742	Lakeland CC	714	2339
			Northwest State CC	588	1791
Fewer than 10 EJC titles in print			Sinclair CC	883	3218
Columbus State CC	1270	5945			
Owens CC	577	2299	Fewer than 20 EJC titles in print		
			Cuyahoga CC	764	3344
			Lorain CC	387	1010
			Rio Grande CC	175	500

TABLE 4
Small University and College EJC Use
January 2000 –December 2000

	TITLES USED	ARTICLES DOWNLOADED		TITLES USED	ARTICLES DOWNLOADED
Fewer than 25 EJC titles in print			Fewer than 50 EJC titles in rint		
Ashland U	1368	8027	Capital U	900	5300
Baldwin-Wallace C	1213	7124	Denison U	1552	10729
Bluffton C	568	2319	U Findlay	868	2821
Cedarville U	1436	9632	Franciscan U	539	2267
Central State U	143	339	Hiram C	1171	5556
Heidelberg C	821	3894	Malone C	438	1363
C of Mt St Joseph	319	958	Xavier U	1292	9168
Mt. Union C	1058	5521			
Mt Vernon Nazarene C	796	3673	Fewer than 100 EJC titles in print		
Muskingum C	892	3983	John Carroll U	1464	9443
Notre Dame of Ohio	218	627	Ohio Northern U	1540	14198
Ohio Dominican U	493	1858	Ohio Wesleyan U	765	3120
Otterbein C	616	1900	C of Wooster	1158	7271
Shawnee State U	897	3682			
Tiffin U	301	1121	Fewer than 150 EJC titles in print		
Ursuline C	369	844	Kenyon C	1322	12166
Wilberforce U	180	381			
Wilmington C	484	1161	Fewer than 250 EJC titles in print		
Wittenberg C	1331	7051	Oberlin C	1192	7286

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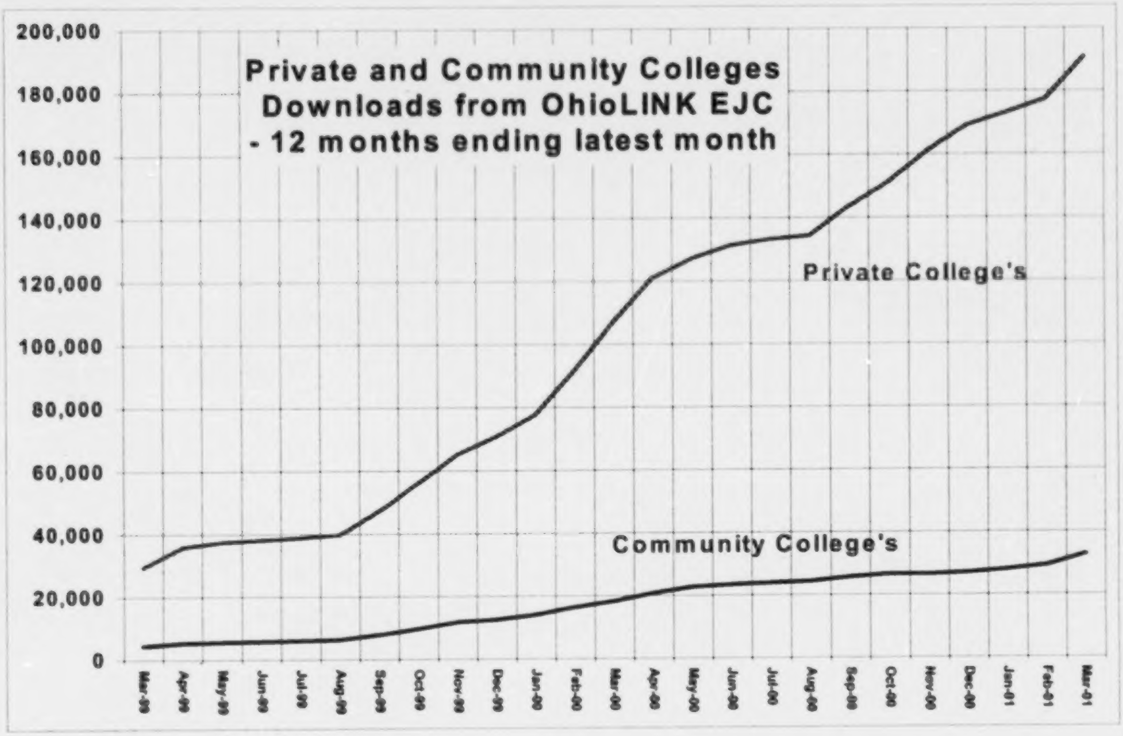
extensive use as in the universities, but on a relative scale to previous access in print it represents a dramatic increase by both two-year and small colleges in use of this material. For small colleges 90-95% of AD were from new EJC accessible titles. Similarly for two-year colleges, 95-100% of AD were from new EJC accessible titles. The benefits to both groups are more than marginal and allow both to upgrade their curriculum and provide faculty far greater access to the latest scholarly publications.

CHART 14



Conclusions

The usage analysis conducted so far indicates that there is a new horizon in information use that colleges and universities acting separately have not experienced in the print-based world. After almost three years of operation and the expansion to fifteen publishers and beyond we see no slow down or ceiling to this phenomenon of expansion in information use. Our continuing experience validates the underlying assumption that motivated the OhioLINK community to develop the EJC system.

The results strongly indicate that libraries and their consortia are in a rapidly evolving arena in which we know that levels of information use will rise through desktop electronic access, but it is not yet possible to predict how high that rise may be. More experience is necessary before we can say what that new and higher equilibrium will look like or at what level it will stabilize. At this early stage patrons have probably not yet fully absorbed what the EJC can do for them even as the OhioLINK EJC continues to become a broader spectrum of journal publishers and as we find new and better ways to integrate the EJC with our other information resources.

But as suggested in this paper usage analysis is in its early stages and not complete nor able to guide us in making more strategic decisions the best long-term equilibrium of economics and content. Acting collectively, with this knowledge, we are in a stronger long-term position to negotiate a healthier long-term solution

Up to this point the OhioLINK community's approach has been very pragmatic. We have a certain amount of funds currently in the system for journal subscriptions, divided among the publisher community in a certain way. Whether relatively high or low priced we seek to make each publisher relationship more economically sustainable with higher levels of journal access and use. Our usage analysis will become more sophisticated to marry usage with cost to determine the true value of each title to the OhioLINK community. This may provide surprising results but certainly a more rational process of managing our long-term needs.

We are very comfortable concluding that users avail themselves of a dramatically broader array of journals then we as individual libraries are able to provide. At the very least we can surmise that we are having a dramatic affect on browsing of journal articles to determine those worthy of more extensive use. The EJC allows for very rapid browsing behavior. The results thus far indicate that librarians should no longer presume to know exactly what patrons will need in the electronic world based solely upon past patron behaviors in the controlled print environment. We need to seek solutions that maximize our ability to let information use expand and seek new levels. Until we experience such an environment we can't accurately answer the question of what we need or don't need. Reliance upon old solutions ultimately deprives us and our patrons of the opportunity to enjoy a higher level of information access. To move forward, we must assume there is an evolution of information use at work and libraries and their consortia must be enablers rather than gatekeepers.

Our approach certainly has risks and will be questioned as a valid means to advance our long-term interests. The critics that would seem to question our approach make assumptions we are not willing to make. These assumptions seem based on the old rules of pre-selection, rationing, and single-site economics. Our experience indicates it is impossible to accurately pre-select even for the largest libraries. Our users are selecting a must wider array of materials than can be anticipated much less pre-defined. Our experience is that pre-selection under current economic constraints prevent access to materials that will be used if made available. Critics fail to appreciate the evolutionary and uncertain nature of what we are doing. At the very least, what we are doing by opening up access to the broadest array of journal titles is to vastly improve our measure of what will be used and not used, what we really need and don't need. No fundamental changes in the scholarly journal market are possible without this as a baseline. In the end we too will make selections, but based on a new definition of information use and need.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number: 117-141-E
Division Number: V
Professional Group: Acquisition and Collection Development
Joint Meeting with: -
Meeting Number: 141
Simultaneous Interpretation: -

eIFL - ELECTRONIC INFORMATION FOR LIBRARIES
A GLOBAL INITIATIVE OF THE SOROS FOUNDATIONS NETWORK

Blazej Feret[1], **Michael Kay**[2]
with co-operation from **Anna Maria Balogh**[3], **Peter Szanto**[4], **Sam Brooks**[5]

Abstract:

The paper presents the history, current status and future development of eIFL Direct (Electronic Information for Libraries Direct) – a large-scale project run by the Soros foundations network and the Open Society Institute. The project aims to provide libraries in developing countries with access to a menu of electronic information resources. In 1999 the project launched its first successful service – access to EBSCO's databases in social sciences, humanities, business, economics and medicine. By the beginning of 2001 more than 2000 libraries in 39 countries were in the process of forming national consortia to ensure funding for the regular and continued access to these databases. The next phase of the project will include addition of science and technology (ST) full text journals, and the development of local content. The paper also describes the evaluation and selection criteria, which were used to choose the services.

HISTORY AND BACKGROUND OF THE EIFL PROJECT

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On September 1, 1999 the Open Society Institute - Budapest (OSI) and EBSCO Publishing agreed to collaborate in a project to create the largest information consortium in the world. The joint multi-million dollar initiative, called *Electronic Information for Libraries Direct - eIFL Direct*, makes information available electronically to libraries (academic, research, medical, public, national, and parliamentary), ministries, and non-governmental organisations (NGOs). Users include scholars, policy-makers, government officials, students and the general public in countries in transition. Over 2 000 institutions now belong to the consortium and the number continues to grow *(see Chart 1)*. To date well over 3 million searches have been performed and this number is increasing markedly as more institutions join and users become familiar with the service (*see Chart 2)*.

Chart 1.

eIFL Direct - growth in the number of registered libraries

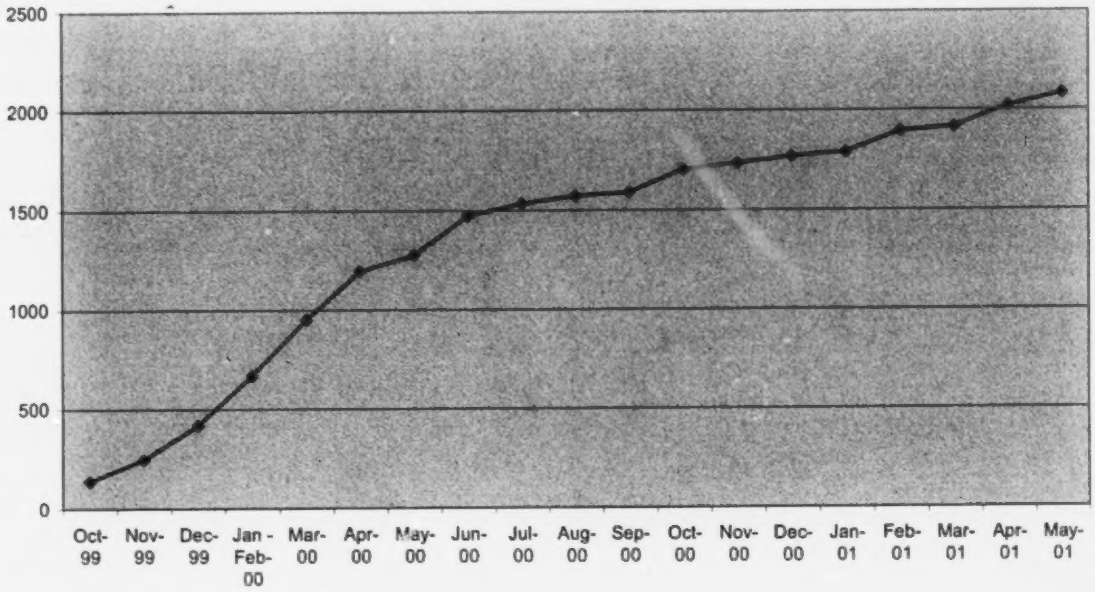
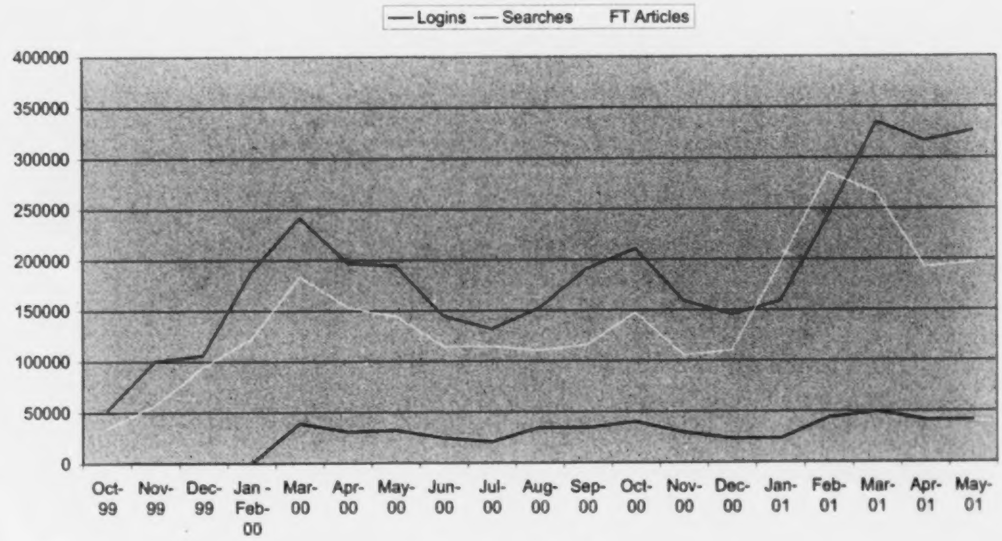


Chart 2.

eIFL Direct online usage from 1st Oct 1999 to 31 May 2001



The venture targets traditionally "information-starved" countries – these are the countries primarily supported by OSI, whose mandate as part of the Soros foundations network is to foster the development of open societies. Access to the widest possible range of information is obviously a major factor in fostering this development. Along with Guatemala and Haiti, 27 countries are from Central and Eastern Europe (mostly former Soviet satellites), and ten are from Southern Africa. The project will be expanded in the coming months to 18 more Western African countries and Indonesia enlarging the consortium to 58 countries.

EVALUATION OF NEEDS AND OFFERS

After a preliminary evaluation of the information needs of libraries in the region, OSI issued an open invitation to tender to all companies dealing with electronic journals particularly in the social sciences and humanities. A total of seven companies submitted proposals. Experts in the field from OSI reviewed these, and three companies were short-listed for further consideration. Two professional teams – one based in Russia and the other in the United Kingdom – then independently evaluated the products. The teams were given over 15 main criteria and 28 sub-criteria to use in their evaluation. The unanimous decision was that EBSCO provided the most comprehensive service available on the market at that time. The OSI Information Sub-Board and finally the OSI Board endorsed this recommendation.

The full list of criteria used for the comparative evaluation of the provider of full text "soft science" (social sciences, humanities, management and economics) are listed in appendix A. Given OSI's mission and the range of countries it serves, the evaluation criteria also included reference to the number of full-text journals with specific focus on Central and Eastern Europe and the former Soviet Union as well as Africa. The need to deal with countries with rather poor connectivity was reflected in the specifications regarding the supply of CD-ROMs. The selection criteria dealing with local content ("Adding Local Content in English" and "Adding Local Content in Local Languages") already pointed to one of the directions the eIFL project would take in the medium-term future. That is to become an umbrella for East-East and South-South delivery of content of local relevance and in languages other than English.

PRODUCT ENHANCEMENTS SINCE THE LAUNCH OF EIFL DIRECT

At the time of the tender EBSCO was providing just under 3,000 full text titles through the EIFL project. Since the project began, over 2,000 new journals have been added to these databases, bringing the total number of available full text journals offered in the eIFL Direct suite of databases to over 5,000. The focus has also shifted from almost entirely soft sciences journals to a mix of soft sciences and STM journals. There are now over 1,000 hard sciences (STM) journals available in full text in the databases available through the project. The Academic Search and Business Source databases have been upgraded to Academic Search Premier and Business Source Elite.

At the time of writing eIFL/EBSCO offers access to six larger databases at the same fixed 3 year cost:

- Academic Search Premier (upgraded from Academic Search Elite)
- Business Source Premier (upgraded from Business Source Elite)
- The Masterfile Premier
- Medline with Biomedical Basic collection
- Health Source Plus
- Newspaper Source

EBSCO is currently working on a Russian interface, which will be particularly useful for many of the users not just in Russia but also in the CIS. This should be completed within the next six to twelve months. Further, EBSCO is in the process of licensing journals in Russian. These journals are expected to be available to the eIFL consortium at some point in 2002. Meanwhile titles published in English from Central and Eastern Europe are continuously being added to the database.

EXPANDING TO "HARD SCIENCE" CONTENT

The formation of the Content Task Force

It was clear from the beginning that there would be some start-up difficulties in a project of this dimension and geographical complexity. In the second half of 2000 the continuation of the eIFL project was threatened by the reality that not all countries had been able to identify the necessary funding. This nearly resulted in a classic Catch 22 situation: libraries were unwilling to find funding without a clear commitment to the continuation of the project – but this commitment would only be given if there was some guarantee about forthcoming funding.

Within OSI there was no doubt however about the two main 'saving' principles:

- there had to be full involvement of the stake-holders, the libraries, if the project was to survive and prosper
- this involvement had to be based on the consortium approach as this form of organisation is best suited to deal with the issues faced by libraries when licensing electronic resources.

This scenario led to the decision to constitute a Task Force on Content, to guide future expansion of subjects and titles offered under the eIFL umbrella. It now meets regularly to evaluate services and content offered by EBSCO and to consider adding new content.

The first priority of the Task Force was to deal with the demand by the libraries in the eIFL project for STM (with the stress on ST) content. This was in response to an extensive survey of the additional information needs of the consortium. (see Appendix B) The aim is to provide this traditionally highly expensive information to countries of the consortium at equitable prices and based on any individual country's state of development and ability to pay.

The first problem to be solved by the Task Force regarding the science and technology content was to decide **how** the choice of full text resources should be made. There are several methods practised in libraries:

- Extending the current print subscription contracts to include full text online. Usually there is no research, no surveys and no evaluation before making this choice.
- The library doing its own research. The library defines the selection criteria and conducts tests and comparisons of the available products.
- Basing any decision on the opinion of advisory or consulting companies or bodies. A good example is "The Charleston Advisor" http://www.charlestonco.com/ , which devised a rating system scoring each product by the following elements: content, searchability, price and contract options/features. The company regularly publishes reviews and comparisons of web products. Another example of an advisory body, which carries out and publishes studies on the evaluation and analysis of full text databases is California State University Libraries Electronic Access to Information Resources Committee (CSU Libraries EAR) http://seir.calstate.edu/ear.rev.fm.html/
- Asking users (via surveys) before the choice is made, what products they want (based on the opinions and evaluation of the users). Here the usual practice is to provide users with a list of services or web links and asking for the evaluation of each of them.

It is common practice in libraries to take a decision regarding which services to contract in one (or a combination) by one of the methods described above. The selection made is later confirmed (or rejected) via surveys distributed amongst library users in the form of database questionnaires or evaluation forms. Examples of such forms may be found at http://library.sjsu.edu/test/testeval.htm or http://www.library.unsw.edu.au/exit.html.

The Content Task Force considered two options for how the selection procedure could be performed:

- analyse the products on the market, evaluate them according to the predefined criteria and select those which the best "fit" the criteria;
- ask librarians (and/or) library users what products they would like access (which products would be essential, or at least useful, for their users)

A third option was proposed and this was in fact the preferred model but considered too difficult to implement. This was to analyse the use of separate journal titles across libraries and then to negotiate access to the full text with the individual publishers involved. This would be a logistic nightmare given the size and diversity of the eIFL consortium.

Finally the Task Force decided to prepare an evaluation survey, in which a large number of services, along with a brief description and URL, were listed (see Appendix B). Respondents were given three choices: 'essential', 'useful', 'not needed'. Libraries participating in the survey could also add other services, which are currently used or would be useful in the future. It also listed over 20 bibliographic databases that could be made available through eIFL. A similar approach has been used for example by Hungarian colleagues during the preparatory phase of a national science and technology consortium in 2000.

The survey was sent to the national co-ordinators of eIFL in March, 2001 with the request to distribute it further to existing participating, as well as non participating, libraries. At the time of writing, 199 libraries and research institutions from 19 countries had sent in their response.

The survey results cannot be published in this article as it was considered inappropriate for S and T publishers to see the results given the forthcoming tender.

The overall results showed:

- Many institutions desired access to a large range of full-text services
- Whilst bibliographic databases were seen as important there was not nearly as much enthusiasm to have access to these as full text journals.

Based on these results, it was decided that:

- The first round tender for S and T should focus on full text alone and that a second round tender would then include bibliographic databases
- Given the number of publishers and services identified in the survey, the tender would be completely open to the S and T publishing industry and that the Content Task Force would not pre-select a number of companies.

The tender process will commence in June 2001 and will be completed by January 2002. Details will be available on the eIFL web site http://www.eifl.net

TOWARDS THE MULTI-COUNTRY CONSORTIUM

The OSI Information Strategy 2001 describes the principles of the eIFL project as follows:

"The project is based on leveraging two features of digital information. First, the Internet's network effect enables demand aggregation on a very large scale: a large consortium of individually poor consumers acquires significant negotiating power. Second, the marginal cost of digital data is zero, so that additional units of high-value digital commodities produced for affluent markets can be resold to less affluent markets at negligible cost to the producer, as long as the transaction cost to the producer is kept low".

It describes its important future role in enabling East-East, South-South and South-East content flow, and in becoming a platform for developing local digital content.

Finally, "the consortium could become a bulk buyer of low-cost hardware and software applications for its member institutions, and an infrastructure for delivering training. At a later stage, it could begin to function as a network for dissemination of policy knowledge and participation in national and global information policy formation".

This is an extremely important strategic vision for the countries in the OSI portfolio. For the first time in many countries, it will facilitate a powerful platform for joint stakeholder action, giving a voice to the library community – a community, which plays a fundamental role in the development of an open society.

The future mission for eIFL will be to lead, support, motivate, and advocate for multinational library cooperation among member libraries for nations in transition around the world. It will develop and deliver innovative library programs and services that advance collaborative activities, resource sharing, and other programs that are responsive to the needs of the library constituencies.

Appendix A

Criteria for comparative evaluation used when choosing social sciences full text provider:

Titles
Total number of titles in full text
Total number of titles providing abstracts only
Total number of titles in full-text excluding leisure and STM journals
Total number of abstracts excluding leisure and STM journals
Total number of publishers contributing

Breakdown by Subject Areas
Total number of full-text journals by the following subject areas: Economics, Education, General social sciences, History, Law, Philosophy, Politics, Psychology, Sociology.

East vs. West titles
Number of full-text journals with specific focus on Central and Eastern Europe and the former Soviet Union.

Overlap of titles
An analysis of the percentage overlap between full-text titles from the two services being evaluated

User interface
An evaluation of the user interface including user friendliness, level of searching i.e. basic to advanced, help screens, any other features

Special Modules
Any special modules e.g. usage statistics etc.

Terms and Conditions
Sample contracts were reviewed by attorneys

Access details
Are there any limits to the number of simultaneous users for both the online and CD ROM versions?
Is access only available in the library or it can be from the university sites on the same campus or elsewhere?
Is access possible from home?
Any other special technical requirements to access the service?

Response time
Assessment of response time testing the system at regular intervals during the day

CD vs. Online
Will CD be provided for every site in the country?
How often are CDs updated?
Can CDs be networked or they are stand-alone?
Are CDs offered for all products?
Are all countries eligible to have CDs?

Price Analysis
Excluding leisure and STM titles, what is the cost per current title?

Excluding leisure and STM titles, what is the cost per title including all issues assuming average back-titles go back three years?

Training and Support
What is the training strategy and is it free?
What helpdesk support is provided?

Professionalism and Pre-sale Service
What was the level of professionalism and attention to detail that the companies showed when dealing with OSI staff and the independent evaluating teams?

Adding Local Content in English
What level of commitment do the individual companies demonstrate to the idea of adding English language titles with specific relevance to the region?

Adding Local Content in Local Languages
Are the companies prepared to add local language titles in the medium term future?

Appendix B

Name of institution: ....

1. Which of the following STM bibliographic databases would your library wish to have access to? If you already subscribe to any of these databases, please indicate which ones.

Please add any other that you currently subscribe to, or wish to subscribe to.

Subject Area	Database	URL	Essential	Useful	Not needed
Engineering	Compendex	http://www.ei.org/			
Physics/ Elec. Eng.	INSPEC	http://www.iee.org.uk/publish/inspec/			
Biology	Biological Abstracts	http://www.biosis.org/products_services/ba.html			
	Biosis Previews	http://www.biosis.org/products_services/previews.html			
Biotechnology	Biotechnology Abstracts	http://www.derwent.com/biotechabstracts/			
Applied Sciences	Pascal Sci-Tech	http://www.silverplatter.com/catalog/pcst.htm			

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Subject Area	**Database**	**URL**	**Essential**	**Useful**	**Not needed**
Applied Sciences	NTIS	http://grc.ntis.gov/ntisdb.htm			
Mathematics	MathSci DAF included	http://www.silverplatter.com/catalog/math.htm			
Civil Engineering	Transport	http://www.silverplatter.com/catalog/tspt.htm			
Agri-Technology	CABI	http://www.cabi.org/BIOSCIENCE/biosys.htm#databases			
	Agris	http://www.silverplatter.com/catalog/aris.htm			
	Agricola	http://www.nal.usda.gov/ag98/			
Food Science	FSTA	http://www.ifis.org/ http://www.silverplatter.com/catalog/fsta.htm			
	Food & Human Nutrition	http://www.silverplatter.com/catalog/fnut.htm			
Chemical Science	Chembank	http://www.silverplatter.com/catalog/cmbk.htm			

Subject Area	Database	URL	Essential	Useful	Not needed
Chemical Science	Analytical Abstracts	http://www.rsc.org/is/database/aahome.htm			
	Chemical Abstracts	http://www.cas.org/			
Geological Sciences	Georef	http://georef.cos.com/			
Metals, composites	METADEX / Materials Collection	http://products.dialog.com/products/oddatas/metadex.html			
Medical Sciences	Medline Advanced	http://www.silverplatter.com/catalog/meds.htm			
	Pascal Biomed	http://www.silverplatter.com/catalog/pbma.htm			
	CAB Health	http://www.cabi.org/Publishing/Products/Database/Health/Index.asp			
Environment	E-CD	http://www.silverplatter.com/catalog/caeq.htm			

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Subject Area	**Database**	**URL**	**Essential**	**Useful**	**Not needed**
Environment	Waste Info	http://www.silverplatter.com/catalog/wsti.htm			
	Environment Abstracts	http://www.bowker-saur.co.uk/ http://www.bowker-saur.co.uk/products/catalog/a_and_i/environ_c.htm			
Telecom.	Computing & Communications				
Architecture	ICONDA	http://www.irbdirekt.de/iconda/			
Education	Eric	http://www.accesseric.org/ http://www.silverplatter.com/catalog/eric.htm			
Other					

2. Which of the following full-text science and technology electronic journal services would your library wish to have access to? If you already subscribe to any of these services please indicate which ones and what your current annual subscription is in USD.

Subject area	Product name and/or publisher	URL + short description	Essential	Useful	Not needed
Multi-disciplinary	Science Direct by Elsevier Science	http://www.sciencedirect.com/ over 1000 journals in life sciences, physics, medicine, technology and social sciences			
Multi-disciplinary	IDEAL by Academic Press	http://www.academicpress.com/ideal/new 174 Academic Press and 60 Harcourt Health journals in science, life sciences and engineering			
Multi-disciplinary	Kluwer Online by Kluwer Academic Publishers	http://www.kluweronline.nl/kaphtml.htm/ONLINE JOURNALS 600 journals covering science, life sciences, medicine and mathematics			
Multi-disciplinary	Wiley Interscience by John Wiley & Sons	http://www.interscience.wiley.com/ 400 journals covering science, life sciences, medicine, engineering, technology and social sciences.			

Subject area	Product name and/or publisher	URL + short description	Essential	Useful	Not needed
Multi-disciplinary	Springer LINK by Springer Science	http://link.springer.de/ 400 journals covering science, life sciences, medicine, engineering and technology			
Multi-disciplinary	Synergy by Blackwell Science/Munksgaard	http://www.blackwell-synergy.com/journallist.asp?sec=A 219 journals covering science, life sciences, medicine and computer science			
Multi-disciplinary	Cambridge University Press	http://www.journals.cambridge.org/ 104 journals covering science, life sciences, mathematics, social sciences, arts and humanities			
Multi-disciplinary	Emerald by MCB University Press	http://www.mcb.co.uk/emrld/which.htm 114 journals covering engineering, technology, library and information sciences as well as management studies			
Multi-disciplinary	Dekker@Pub by Marcel Dekker	http://www.dekker.com/epub/epub_top.htm 78 journals covering science, engineering, technology and medicine			

Subject area	Product name and/or publisher	URL + short description	Essential	Useful	Not needed
Multi-disciplinary	NRC by NRC Research Press	http://www.nrc.ca/cisti/journals/rp2_home_e.html 14 journals covering science and life sciences			
Electrical Engineering	IEL by IEEE/IEE (The Institute of Electrical and Electronics Engineers Inc and Institute of Electrical Engineering)	http://www.ieee.org/products/online/iel/ielprod.htm access to the collections of IEEE/IEE journals (120), proceedings (600) and standards (875), primarily in electrical engineering, physics and computer sciences			
Chemistry	ACS - American Chemical Society	http://pubs.acs.org/about.html access to the collection of ACS journals (35) primarily in chemistry			
Chemistry	RSC - Royal Society of Chemistry	http://www.rsc.org/is/journals/j1.htm access to the collection of RSC journals (22) in chemistry			
Mechanical Engineering	ASME - American Society of Mechanical Engineers	http://www.asme.org/pubs/journals access to the collection of ASME journals (17) in mechanical engineering			

Subject area	Product name and/or publisher	URL + short description	Essential	Useful	Not needed
Civil Engineering	ASCE - American Society for Civil Engineers	http://www.pubs.asce.org/journals/jrns.html online coverage of 29 journals covering civil and structural engineering			
Civil Engineering	ICE – Institution of Civil Engineers	http://www.t-telford.com/jolnew/bytitle/ce.asp access direct to 12 ICE and Thomas Telford Journals covering civil and structural engineering			
Physics	AIP - American Institute of Physics	http://ojps.aip.org Access to 98 AIP and ASCE journals covering physics			
Physics	Institute of Physics	http://www.iop.org/Journals/bytitle access direct to 34 IOP journals covering pure and applied physics			
Computer Science	ACM - Association for Computing Machinery - Digital Library	http://www.acm.org/dl access via ACM Digital Library to 25 ACM and Baltzer journals in computer science			

Subject area	**Product name and/or publisher**	**URL + short description**	**Essential**	**Useful**	**Not needed**
Mathematics	SIAM – Society for Industrial and Applied Mathematics	http://epubs.siam.org/ access direct to 11 SIAM journals covering mathematics			
Mathematics	AMS – American Mathematics Society	http://www.ams.org/journals/ access direct to 8 AMS journals covering mathematics			
Biotechnology	Mary Ann Liebert	http://www.liebertpub.com/ access via aggregators to 15 journals in the field of biotechnology			
Other					

3. Which ministry(ies) in your country does your institution receive funding from? ....

4. Do you receive any funding support from other sources such as private sector sponsorship? ....

5. Would your institution accept private sponsorship to subsidise the cost of access to these services if funds were available?
....

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How can evaluation get us to the heart of learning in the electronic age?

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Introduction

Evaluating the impact of access to electronic information is a key challenge globally for memory institutions such as archive, libraries, and museums. This is because of their need to carefully manage limited resources to best serve users' needs, and to justify to purse-holders that this investment represents good value for money. As these purse-holders are often educational institutions or government departments, value for money must generally be measured not in value to an individual user but in terms of contribution to the creation of a knowledge economy.

Too often evaluation of access to electronic resources is bogged down in the processes of managing that access. For example, an interim evaluation of the UK's National Electronic Site Licensing Initiative (Richardson et al. 2000) produced the following major conclusions:

- NESLI has achieved much in a rapidly-changing and complex environment. It has done very well in difficult circumstances.
- There is widespread support from all stakeholders for the principle of a single negotiating body for e-journals on behalf of all UK universities. NESLI constitutes a significant advance in the way new business deals are transacted in the developing electronic marketplace and is being closely monitored in many other countries.
- Progress in agreeing deals, getting them accepted by libraries and achieving end user take up has been slow because of the complexity of the process. Nevertheless there are signs of gathering momentum and support from all the necessary stakeholders.

- Although it needs to be negotiated in each case and the legal complexities can be daunting, the model licence has been a major success in providing the framework for significant deals.
- The offers that have been made have been of value to some libraries but the different situations of the libraries means that a single offer cannot meet all needs.
- Evaluating complex deals in a limited timescale has led to many libraries being unable to take up offers.
- Offering the service through a single portal has advantages in providing one access point for end users but is seen as a restrictive practice by many stakeholders concerned about a single service undertaking all activities.

The point here is not about the NESLI service -- it is that negotiating and managing access to electronic resources is such a complicated business that our evaluation activities rarely penetrate to actual user experiences. Sometimes we get hints of the widespread managerial changes that are revolutionising information professions, and there is increasing anecdotal evidence to suggest that some users are by-passing traditional printed resources if they possibly can. What we need to evaluate is whether people learn from, and use, information in a new way when they can get at it electronically.

Two key things are needed to help us evaluate access to electronic resources more effectively. The first is a clear policy framework. The second is a robust methods framework.

A Clear Policy Framework

Every institution, every region, every country will have a different set of policy pressures that might be applied to the evaluation of access to electronic resources. For example, in the UK the government is investing in Further Education colleges to ensure that each has Internet connections and access to high-quality electronic information and materials. Key objectives for the Further Education sector as a whole include increasing participation from communities that are traditionally socially-excluded, increasing retention rates for students who begin courses, and improving rates for their successful conclusion of these courses.

It would be easy for these pre-existing policy pressures to be applied simply to the evaluation of electornic resources. For example, in the UK we might be asked what percentage increase in retention rates will be achieved by spending £100,000 pounds on access to electronic learning materials.

The answers would not necessarily get any of us very far. The answers would depend on the very mass of management issues they we should be trying to penetrate: where would the money come from, how would awareness of the available resources be promoted, how would information professionals and course lecturers be trained to feel confident in their use, etc., etc., etc.

The challenge is on: information professionals must be part of a wider policy debate about the ways in which electronic accesss to information can/should be expected to contribute to the creation of a knowledge economy. For example, routine access to electronic resources for all would facilitate the learning and sharing of basic computing skills.

There are many efforts underway to stimulate these policy debates, but it is unclear how the varied communities of practice with a shared interest are joining their efforts together. Are policy advisors taking a lead? Are educational or economic think tanks? Are library associations?

One interesting experiment that is underway is spear-headed by the Andrew W. Mellon Foundation in the US. It is conducting a survey on higher education research and policy issues concerning online education, instructional technology, and distance learning. The outcomes of this exercise should be enlightening, and could be usefully modelled in other countries. Key goals of the survey are to guage:

1. The greatest issue of concern regarding the use of instructional technology in higher education.
2. Whether the use of instructional technology in on-campus contexts if believed to affect the quality of teaching.
3. The perceived promise of distance education.
4. Whether instructional technology may enhance access to or equity in higher education, or has the potential to grow enrollment and reaching/marginalising new types of students.
5. The characteristics of high-quality and effective online learning.
6. Perceived potential impacts that the use of instructional technology might have on academic values, processes, or governance.
7. The economic benefits, if any, to using instructional technology, and the opportunity costs of large investments in instructional technology and distance leaerning.
8. The potential impacts on existing campus resources.
9. The likely changes that the use of instructional technology are likely to bring, and likely sources of resistance to these changes.
10. Valuable avenues for empirical research on the use of instructional technology, the growth of online education, and the emergence of the new distance learning ventures.

A Robust Methods Framework

Once the challenges to be addressed with access to electronic resources are clear, then the right questions can be asked. It is then that a robust methods framework will be essential for measuring progress toward our goals.

Explicit evaluation methodology has been the focus of many projects looking at institutions (e.g. Lubans 2000, Parnell 2001, Squires 2001), media types (e.g. Ehrmann 1997), or specific subject areas (e.g. Porter and Greenstein 1997).

Delving deeper into the literature of any discipline is likely to reveal a range of articles on computer applications and their impact on scholarship. Evaluating access to electronic resources will clearly need to involve reflective practitioners such as these. For example, in my own discipline of archaeology the literature has seen first the introduction of computing applications, then excited singing from the choir of the convinced, followed by a rather pessimistic backlash, and finally by more mature reflection and evaluation (Aldenderfer 1998, Allen et al. 1990, Bewley et al. 1999, Clark 1996, Gillings and Goodrick 1996, Gillings and Wise 1999, Lock 1995, Miller and Richards 1995, Orton 1999, Richards and Robinson 2000, Wheatley 1993, and Wise 2001).

In the UK a three-year project has been funded with the explicit purpose of developing a national User Behaviour Monitoring and Evaluation Framework (Rowley 2000).

The project has four strands, all due to be complete in July 2002. These are:

A. *General survey of end users of all electronic information services* described as a single broad-based sample survey of patterns of use and non-use of all electronic information services by librarians, academics and students administered through face-to-face or telephone interviews to ensure accurate sampling of all relevant sub-populations.

B. *A 'real time' survey of the use of JISC-funded services* through a combination of Web based questionnaires, session logs, and user password data to profile users.

C. G*eneral survey of provision* thorugh a combination of a Web survey of resource access provided by individual universities, with telephone polls of purchasing intentions, backed up by a small number of face to face interviews with key informants to profile service provision.

D. *A qualitative longitudinal monitoring of use* through an ongoing programme of longitudinal qualitative evaluation centred around a selection of institutions and subject, and an associated programme of one-off studies on the behaviour and needs of specific disciplinary groups.

Preliminary results (Rowley 2000) from the first year of this monitoring and evaluation framework are promising, although they inevitably highlight the many complexities and managerial issues still facing information professionals.

Key issues highlighted include:

1. The diversity of the UK university community. There are institutions where staff and students have very limited access, and library web sites are only just being established. There are academic staff who demonstrate innovative approaches to the integration of electronic resources in learning, and there are other staff who believe that electronic resources have no relevance for their activities. National initiatives, specifically provision of the JANET network and data centres hosting commercially-licenced resources, are cited as clearly having some impact in levelling the national playing field.
2. Key policy issues include government agenda on widening access and participation in education and regular, rigourous quality reviews of educational provision. These influence attitudes about access to electronic resources and can present problems.
3. Managerial issues facing library and information services are very serious. Collection development is frustrated by changing access and purchase arrangements for sources such as electronic journals. Budgets devolved from the library to departments further complicates matters.
4. Academic staff act as key 'gatekeepers' to student learning, and this privileged relationship should be drawn upon. It is essential to build their skills and confidence.
5. General Web search engines and known Web sites are the first resort for most academic queries, as well as for many personal searches, done by undergraduate students. There is little if any evidence to suggest that they use the many tools designed by their institution library and information service to facilitate their general searching, or that they appreciate

the potential time savings offerred by these tools. General Web skills tuition needs to continue or be increased.

6. Graduate students often have a well developed knowledge of specific sources relevant to their studies, but in other respects do not appear to use electronic resources in a substantially different way than undergraduate students.
7. Use of commercially-licensed databases and journals was low.

One of the deliverables from this interesting project will be a transferable 'toolkit' for evaluating the stage of an institution's development in terms of facilitating access to, and use of, electronic resources.

This monitoring and evaluation framework project has already had the welcome affect of stimulating some debate about evaluation and the role of academic resources in the UK higher education community (e.g. Lonsdale and Urquart 2001) and will no doubt continue to stimulate and challenge in upcoming years. Greater international co-ordination of similar initiatives would be very welcome, as would debate in the library and information community.

Another key area of development is in obtaining fair, comparable usage statistics about online resources. Much of this work is stimulated by library requirements to justify/challenge high subscription prices for electronic subscriptions. This area is a minefield, however, with widely varying practices used by publishers and libraries to record, measure, and report usage statistics. Some high-profile groups have taken the daring step of publishing conclusions about user behaviour based on usage statistics currently available. While these conclusions may be borne out in time, it seems sensible to await further implementation of the ICOLC Usage Statistics Guidelines (ICOLC 1998) and detailed implementation studies being undertaken by the PALS group in the UK (PALS Usage Statistics Working Group 2001), and the ARL e-metrics project in the US.

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Teaching Classification in the 21st Century

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Abstract:

Classification instruction in the new millenium will be markedly different because the focus and needs of our users have altered, as have information formats. Although the purpose of classifying information remains the same in the 21st century as in the 20th century—assisting users in locating relevant information--we must teach the process in such a way that the librarian or information scientist will be able to apply that knowledge to the organization of information in any format. Teaching classification during the past century was, in some cases, a practical approach for parking information in stacks. While a theoretical overlay was present, the thrust of the courses was not the organization of information, but the organization of books in catalogs and on shelves. In the world of the 21st century with a variety of formats, the theoretical basis is becoming more important. The challenge for library and information science educators is to educate classifiers to organize the formats of the future while responding to the continuing need to classify print materials in libraries. The focus of this paper is on teaching classification and organization of information whether the information is in digital form, in the World Wide Web, in databases, in print form, or in books on shelves.

Background

Cataloging and classification curricula in schools of library and information science have been studied and written about by a number of authors and educators. (1) If these topics have been researched so extensively why do they continue to be written about? The answer, of course, is that the constant and frequent changes occurring within libraries and in the library profession have serious implications for cataloging and classification education. The curriculum must be flexible and dynamic if it is going to meet the needs of this evolving environment. Vellucci says that "a constant examination of both the curriculum and the environmental change is required in order to sustain a cataloging curriculum that is responsive to an evolving profession yet grounded in solid theory and principles."(2)

Educators want to prepare their students for the future, yet no one is sure what that future will look like. In light of that uncertainty, cataloging teachers are constantly watching for the factors likely to influence the organization of information, in order to incorporate appropriate changes into their courses. But how much new material can be added to a course before it becomes overloaded? What can be deleted without leaving a significant gap in knowledge? "The inevitable result is not only the restructuring of a specific course, but a rethinking of the entire context of the cataloging curriculum to accommodate new areas of study, while retaining the fundamental theory and critical thinking process that will enable students to adapt to their changing futures."(3)

Theory versus Practice

One of the most long-standing controversies among cataloging (4) educators and practitioners is how much cataloging and classification theory and how much practical application should be included in cataloging courses, particularly the basic or introductory courses. Most educators feel that a firm grounding in the theory and principles underlying the organization of information will better enable catalogers to adapt to changing environments. If catalogers have a solid grounding in theory, they will be better able to understand and accept changing cataloging and classification systems.

Practitioners, on the other hand, want to hire recent graduates with practical knowledge of the existing cataloging practices, who will require less training in routine procedures and be more productive in the long run. But to teach both the theory and practical knowledge, in-depth, would require more hours than are allotted to most cataloging courses.

Recently, there has been a shift in attitude among cataloging practitioners toward an emphasis on theory as opposed to practical knowledge. With the introduction of electronic resources, the World Wide Web, electronic databases and digital libraries it is becoming increasingly important for cataloging librarians to know how to adapt their knowledge to these new formats. If cataloging librarians are going to be players in the organization of electronic materials they will need to understand the theoretical basis for subject analysis, including classification.

Teaching Classification

Automation, electronic databases, and the enormous expansion of information on the World Wide Web have allowed library and information science practitioners, educators, and users to recognize the value of understanding both the theoretical underpinnings and practical application of classification. Williamson identifies seven categories of information covered in required courses which include some classification: Principles, Theory, Historical Background, Objectives, Specific Classification Systems, Facet Analysis, and Automatic Text Analysis. (5) Several other authors have identified some or all of these categories in texts and readers in cataloging and classification. (6) To examine what is currently taught about classification, how it might be taught and how it might be taught in the future, I would like to use the course I teach at Simmons College as a case study.

Simmons GSLIS as Case Study

Simmons College Graduate School of Library and Information Science (GSLIS), Boston, MA, USA, requires that all students take the course entitled, "Organization of Knowledge." This course is considered the core or basic introduction to cataloging and subject analysis including classification. Simmons GSLIS has a major commitment to the teaching of cataloging and classification and, as a result, there are four full-time faculty members with a background and interest in cataloging and subject analysis. In addition, classification concepts are included in "Advanced Cataloging and Classification," "Non-Print Cataloging," and "Subject Analysis." Some of the specialized courses such as "Art Documentation," "Music Librarianship," and "Medical Librarianship" discuss classification as it relates to that specific subject.

Subject analysis including classification occupies about one-half of the basic course. Principles of subject headings, controlled vocabulary versus natural language, pre- and post-coordinated systems, and the use of Library of Congress subject headings are covered under subject headings. The classification portion of the course covers principles of library classification, the use of the Library of Congress classification, and of the Dewey Decimal classification, and other classification schemes which are used worldwide are also covered briefly.

Intner writes that "Authors of articles in the literature, speakers at meetings, and faculty and students in library schools all seem to agree on three things about cataloging coursework: there is an enormous amount of material to be covered; it is difficult and it is dull. Nothing is clearer than the compelling need to make cataloging issues manageable for the students learning about them and to make the learning process interesting."(7) It helps to show students how they can apply what they learn to actually assist users in locating information. In addition, it is necessary to make the students feel like they are learning something that will be relevant to their future careers.

At the beginning of the course students are asked to search titles, authors and subjects in library catalogs, databases, and the Web to illustrate the differences in access in catalogs and the role that control plays in locating information. Another exercise is used to emphasize the value of controlled vocabulary such as subject headings and of classification. Students are asked to search for a specific title without using any cataloging or classification information. They are, in effect, searching for a needle in a haystack. Then, they are allowed to use classification schedules and subject headings. They also search for information on the Web and look at Web site catalogs organized by library and other classification schemes. This helps students to appreciate the role of classification in organizing and locating information, and to make the discussion of theory more relevant.

The introductory course also examines theory of classification and then moves on to the Library of Congress and Dewey Decimal Classifications. Other classification schemes, such as UDC and Bliss, are briefly reviewed, but not actually taught or applied. Students are given a number of exercises in which they apply both the Library of Congress and Dewey Decimal Classifications to list of titles and then to actual library materials. After applying these classification schemes students are better able to consider the theoretical aspects of classification. The study of classification wraps up with a discussion of how theoretical understanding can facilitate application.

Because of the tremendous amount of material expected to be covered in a short time, all exercises take place outside the classroom. But each year the material to be added increases, and the problem of what to include becomes more and more difficult.

The balance of the theoretical and the practical, the use of physical items and electronic resources, the study of the more traditional library applications, and the new Web uses of classification stimulate student interest and attention. But it is interesting to note that students look for a balance. If a faculty member seems to cover more theory than practice; the students will ask for ways to learn the practice, even if it means spending more of their own time.

As I mentioned earlier we have four full-time faculty members teaching the "Organization of Knowledge." As can be expected each has a slightly different approach to the course based on their background, experience, and interests. Consequently, some of the sections of the course are more theoretical than others. Initially, students are most interested in learning what they think they will need to get a job. They mirror more closely practitioners in their desire for practice over theory. However, once the relevance of theoretical knowledge is demonstrated, students become much more interested in learning it. They also can appreciate the rapid change in the field and how understanding theory and principles will enable them to adapt to change.

Teaching Classification in the Future

In the future, teaching classification is going to become both easier and more difficult. It is going to become easier because the Web will yield many examples of the value of using classification systems and the problems of not using them. It will also be easier to establish relevancy for students new to an area of study that may of them have feared and dreaded. It is going to become more difficult because more theory and a wider variety of classification schemes will need to be covered.

As technology has increased interest in the study of the theory of classification, it will also facilitate the teaching of classification. Programmed learning and Web tutorials may enable students to learn more outside the classroom and thus help to alleviate the problem of "how do I cover all of the traditional material as well as all of the new material."

(1) See Francis Miksa, "Cataloging Education in the Library and Information Science Curriculum," in *Recruiting, Education and Training Cataloging Librarians,* S. Intner and J.S. Hill, eds. (New York: Greenwood Press, (1989): 273-297; Jerry D. Saye, "The Cataloging Experience in Library and Information Science Education: An Educator's Perspective," *Cataloging & Classification Quarterly* 7:4 (Summer 1987): 27-45. Roxanne Sellber, "The Teaching of Cataloging in U.S. Library Schools," *Library Resources and Technical Services,* 32:1 (January 1988): 30-42; Alan R. Thomas, *The Library Cataloging Curriculum, USA: A Survey of the Contemporary Compulsory Instruction (*London: Panizzi Press, 1976); Michael Carpenter, "Making Cataloging Interesting," in *Recruiting, Educating and Training Cataloging Librarians*, S. Intner and J.S. Hill, eds. (New York: Greenwood Press, (1989): 169-186; Kathryn Luther Henderson, "Some Persistent Issues in the Education of Catalogers and Classifiers," *Cataloging & Classification Quarterly* 7:4 (Summer 1987): 5-26; Doris H. Clack, "Education for Cataloging: A Symposium Paper," *Cataloging & Classification Quarterly* 16:3 (1993): 27-37; J. Bradford Young, "The Teaching of Cataloging: Education or Training," *Cataloging & Classification Quarterly* 7:4 (Summer 1987): 149-163; Nancy J. Williamson, "Classification: What Should We Be Training People to Do?" in *Classification of Library Materials,* B.G. Bengtson and J.S. Hill, eds. (New York: Neal-Schuman, (1990): 27-39.

(2) Sherry L. Vellucci, "Cataloging Across the Curriculum: A Syndetic Structure for Teaching Cataloging," *Cataloging & Classification Quarterly* 24:1/2 (1997): 35-57.

(3) Ibid., p. 36.

(4) Cataloging is used in this paper to include descriptive cataloging, classification and the assignment of subject headings.

(5) Nancy J. Williamson, "Classification: What Should We Be Training People to Do?" in *Classification of Library Materials,* B.G. Bengtson and J.S. Hill, eds. (New York: Neal-Schuman (1990): 30.

(6) See Michael Carpenter and Elaine Svenonius, *Foundations of Cataloging: A Sourcebook (*Englewood, CO: Libraries Unlimited, 1985); Lois Mai Chan, *Cataloguing and Classification: An Introduction,* (2nd ed.) (New York: McGraw-Hill, 1994); Lois Mai Chan, *A Guide to the Library of Congress Classification,* (5th ed.) (Englewood, CO: Libraries Unlimited, 1999); Lois Mai Chang, John P. Comaromi, Joan S. Mitchell & Mohinder P. Satija, *Dewey Decimal Classification: A Practical Guide,* (2nd ed., rev. for DDC21) (Albany, NY: Forest Press, 1996); Ia C. McIlwaine, *Guide to the Use of*

UDC, (rev.ed.) (The Hague, Netherlands: IFLA, 1995); Ann F. Painter (ed.), *Reader in Classification and Descriptive Cataloging,* (Washington, DC: NCR Microcard Editions, 1972); Arlene G. Taylor, *The Organization of Information,* (Englewood, CO: Libraries Unlimited, 1999); Arlene G. Taylor, *Wynar's Introduction to Cataloging and Classification,* (9th ed.) (Englewood, CO: Libraries Unlimited, 2000).

(7) Sheila S. Intner, "Responding to Change: New Goals and Strategies for Core Cataloging Courses" in *Recruiting, Educating, and Training Cataloging Librarians,* S. Intner and J.S. Hill, eds. (New York: Greenwood Press, (1989): 230.

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Knowledge organization and information retrieval in times of change – concepts for education in Germany

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Abstract:

A survey is given, how modifications in the field of the information processing and technology have influenced the concepts for teaching and studying the subjects of knowledge organization and information retrieval in German universities for library and information science. The discussion will distinguish between fields of modifications and fields of stability. The fields of the modifications are characterised by procedures and applications in libraries. The fields of stability are characterised by theory and methods

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There have been many reports on the content of education at German universities for library and information science in the fields of knowledge organization and information indexing published in the literature.[1] In past years changes have not been presented continuously in view of speeding dynamics of development. It is not only the contents, but also the concepts that have changed increasingly. On the one hand, these changes are the result of a development within libraries marked by the introduction of Online Public Access Catalogues (OPACs) and the use of the Internet for research. On the other, they are the consequence of a more fundamental reorientation: Information indexing is no longer seen as only a data producing activity for the description of the contents of a book, but at the same time it takes into consideration the retrieval of that data within the electronic environment.

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[1] Cf. for example, Sickmann, L. (Ed.): Das Fach Sacherschließung in der bibliothekarischen Ausbildung: Vorträge der Fortbildungsveranstaltungen des Bibliothekar-Lehrinstituts in Verbindung mit der Gesellschaft für Klassifikation am 7. u. 8.12.1978 und dem Verband der Bibliotheken des Landes NW am 28. u. 29.3.1979. Köln: Greven 1980. (Arbeiten aus dem Bibliothekar-Lehrinstitut des Landes Nordrhein-Westfalen; V. 50);
Gödert, W.: Klassifikatorische Inhaltserschließung: Ein Übersichtsartikel als kommentierter Literaturbericht. *Mitteilungsblatt. VdB NW.* N.F. 40 (1990) v. 2, pp. 95-114; Gödert, W.: Verbale Inhaltserschließung: Ein Übersichtsartikel als kommentierter Literaturbericht. *Mitteilungsblatt. VdB NW.* N.F. 41(1991) v.1, pp. 1-27;

The following understanding forms the basis of today's concept: Important and reliable methods of classification and indexing have to be kept and supplemented by methodical basics of modern, technically supported procedures in the fields of subject indexing and information retrieval. Both have to be illustrated by examples from fields of application that are changing constantly and include not only libraries[2].

German education in the fields of knowledge organization and information indexing has always traced international developments and integrated them into the curricula, at least on the level of method, though not so much on the level of specific applications. For example, *Ingetraut Dahlberg's*[3] study "Grundlagen universaler Wissensordnung", which compares and analyzes the world's most important universal classification systems, had a great influence on curricula and their methodic organization. This study strongly influenced the consideration of faceted classifications[4] and the reception of the work of the Classification Research Group. This also later resulted in a more intensive discussion about the *Preserved Context Index System (PRECIS)*, although this actual method has never been used in German libraries[5].

Consideration of international developments has led to a methodical basis which is still part of the curricula. This basis comprises the content analysis, the epistemological, structural and linguistic foundations for the production of verbal and classificatory documentation languages. It both contains the principles of coordinated and syntactic indexing and also principles and tools for post-coordinated Boolean retrieval. Recently, linguistic and statistically based methods for retrieval as well as methods of automatic indexing have increasingly been taken into consideration.

In this way, information indexing as a core discipline within the curriculum of education for library and information science has taken over the responsibility to extend certain methods of analytical thinking and deriving conclusions to students.

This means for example that in the treatment of classificatory indexing one has to deal with the conceptual organization of classification systems (what is a class?, what is meant by structure?). One also has to mediate the basic features of enumerative classification systems, systems with standard subdivisions and

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Schulz, U. Zur Didaktik der inhaltlichen Erschließung in der Ausbildung von Diplom-Bibliothekaren. *Bibliothek: Forschung und Praxis*. 16 (1992) v.3, pp. 255-263.

[2] The presentation given here is based on the curriculum at the Department of Library and Information Science at the University of Applied Sciences, Cologne. With necessary adaptations it can be seen as typical of other German universities in the field of training librarians.

[3] Dahlberg, I.: Grundlagen universaler Wissensordnung: Probleme und Möglichkeiten eines universalen Klassifikationssystems des Wissens. Pullach : Verlag Dokumentation 1974. (DGD-Schriftenreihe; Bd.3).
Cf. also: Dahlberg, I.: Major developments in classification. *Advances in librarianship*. 7 (1977), pp. 41-103.

[4] Important for the treatment of faceted classification schemes: Buchanan, B.: Theory of library classification. London: Bingley 1979. (Outlines of modern librarianship; vol.11). Also pub. in German as *Bibliothekarische Klassifikationstheorie*. Übers. von U. Reimer-Böhner. München: Saur 1989.

[5] Deutsches Bibliotheksinstitut (Ed.): PRECIS: Für die Anwendung in deutschen Bibliotheken überarbeitete u. vereinfachte Form des syntaktischen Indexierungsverfahrens der British Library. Berlin: Dbi 1984. (dbi-Materialien; Bd.35). Reviewed J. Austin *International classification* 12(1985) pp. 41-43.

facets, as well as discuss the possibilities for their particular potential applications concerning shelf arrangement, organization of catalogues and retrieval.

After this more pure or theoretical discussion, the curricula have to consider those methods which are applied in the libraries. Within the area of classification and indexing there are a variety of classification schemes for shelving. Additionally - caused by the historical developments in Germany[6] - a lot of classification systems that do not reflect the order of books on the shelves but are used for catalogues have to be mentioned. Just recently, the future use of the DDC for national bibliographic services and the synchronization with international projects for indexing have been discussed[7]. In the field of verbal subject indexing the *Regeln für den Schlagwortkatalog (RSWK)* and the *Schlagwortnormdatei (SWD)*, which is the basis for cooperative indexing, are considered in the curricula to some extent. It is not the main objective to impart knowledge about the code in detail. It is rather a question of mediating the principal characteristics of verbal documentary languages in order to represent the contents of documents in a coextensive way. These characteristics are, for example, the forming of concepts, terminological control, concept relations and possibilities of their representation. Then, rules for the choice of subject headings are of equal importance to the principles of creating and applying a thesaurus.

The latter is especially taken up when dealing with approaches and methods to make indexing results searchable within the online environment, e.g. retrieving precombined subject headings or classification notations by their verbal representations. Technical changes have caused a reorientation here. Formerly, methods of filing for the production of card catalogues or lists in book catalogues were top priority. But now, methods for retrieval have been added. It is important to consider the possibilities for searches within a wide range of retrieval environments: OPACs, all kinds of literature databases – no matter whether CD-ROM or online databases, a selection of fact databases and especially the Internet with all its different offerings, directory services and search engines.

In dealing with OPACs one has to consider the range from in-house solutions to WebOPACs. One has to note questions concerning retrieval features, user behaviour from respective studies as well as possibilities of data interchange.

Certain questions are common in all retrieval environments, but they look different on the surface. Great importance is therefore attached to the mediation of structural common characteristics. Because of this, the students should be able to acquire competences on a methodic meta level in order to be able to pursue future developments independently on their own.

Within this context, central questions are the interplay between measures in the area of vocabulary in order to improve the retrieval results and the possible roles that tools and methods of information retrieval might play, if necessary as replacement. This interplay comprises, for example, retrieval characteristics of uncontrolled vocabulary and the characteristics of extracted, standardized descriptors.

Possibilities for the production of conceptual navigation tools on the basis of standardized vocabulary are also discussed. This includes the possible roles classification systems can play as means of structure for navigation, and also comprises the role of appropriate indexes as entry vocabulary.

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[6] Nohr, H.: Systematische Erschließung in deutschen Öffentlichen Bibliotheken. Wiesbaden: Harrassowitz 1996. (Beiträge zum Buch- und Bibliothekswesen; Bd.37); Lorenz, B.: Systematische Aufstellung in deutschen wissenschaftlichen Bibliotheken. 3rd ed. Wiesbaden: Harrassowitz 1995. (Beiträge zum Buch- und Bibliothekswesen; Bd.21)

[7] Einführung und Nutzung der Dewey Decimal Classification (DDC) im deutschen Sprachraum: Vorgelegt von der Arbeitsgruppe Klassifikatorische Erschließung im Auftrag der Konferenz für Regelwerksfragen. Frankfurt: Die Deutsche Bibliothek 2000

Search tools on the Internet play an important part if used as examples. One can indeed use the students' familiarity with these aids (which certainly exists) to deal with more demanding subjects. For example, one can use *Yahoo!* to discuss different problems concerning the systematic arrangement of subject gateways. Most search engines are good examples for retrieval characteristics of free-text and principles of relevance ranking. This can be supplemented by special characteristic features of search engines like *Google* (citation ranking) or *AskJeeves* (computational linguistics). The discussion can also be combined with products like *Knowledge Finder®* and its special indexing and retrieval features. In this way, the number of examples has both increased and also become varied and makes familiar procedures (like citation indexing) appear in a new light.

The use of procedures of automatic indexing has become of interest to libraries because of the increased consideration of information indexing from the user's point of view[8]. Not all the titles in German library OPACs contain controlled data produced by subject indexing. And this won't change in the near future despite various plans in the fields of retrospective digitization and the increased consideration of external source data. Procedures of automatic indexing can create a homogeneous situation for retrieval if they make use of intellectually produced and structured vocabulary. If the results meet the expectations of German-speaking users, one will have to take the fundamental dependency of languages into consideration when choosing the appropriate methods for automatic indexing. This has resulted in the development of specific procedures of indexing for German documents, which are dealt with[9] in the curriculum. The treatment of these specific methods has to be supported by general and computational linguistic basics.

In order to be able to discuss the sense and profit of automatic indexing in comparison and addition to other (mostly intellectual) indexing procedures correctly on the level of method, principles how to realize retrieval tests and their results have further been integrated into the curricula. The range extends from specific tests in library OPACs to methods and results of the *Text Retrieval Conferences (TREC)*.

Subject indexing can no longer be applied to the document type "book" only. It also has to consider other forms of information media, for example images, films, sound carriers and web-pages. In addition to this, the limits of the field of application have become fluid: Next to specialized in-house-solutions for defined groups of users, one has got cooperative efforts in the field of libraries or even projects to produce web-based subject gateways or information portals with partners coming from various scientific fields or the information industry.

More and more, international indexing projects have to be seen in the context of multilingual demands. That is why these problems on the fundamental methodic level as well as on the level of application have been integrated into the curricula.

Increasingly, approaches for standardization (data formats, authority files, metadata) and methods for data interchange are taken into consideration. One can expect that concepts like *XML (Extensible Markup Language)* will gain more importance in the future. But, more and more, you have to weigh up which field you want to pay more intention to: either the specific library approach or the general approach to the solution of problems. Today, there is certainly a trend towards the general approaches. Yet it remains a challenge to ensure that the specific library necessities do not come off worst.

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[8] Gödert, W., K. Lepsky: Semantische Umfeldsuche im Information Retrieval. *Zeitschrift für Bibliothekswesen und Bibliographie*. 45(1998) v. 4, pp. 401-423.

[9] Lepsky, K.: Automatische Indexierung zur Erschließung deutschsprachiger Dokumente. *Information Wissenschaft und Praxis*. 50(1999) v.6, pp. 325-330.

Recently, this trend has become clear in the understanding of knowledge organization and information retrieval at German universities that are dedicated to information economy. Results of Information indexing in this context are considered not only as a necessary precondition for individual knowledge acquisition but also as a part of a chain of value added under secondary economic conditions and, because of this, as a part of the so-called knowledge management. Preoccupation with new methods and procedures as well as the treatment of the question what is meant by knowledge and information in the context of knowledge organization and information retrieval follows on from this. In this way, reflections on content analysis and structure of knowledge, which have traditionally been embodied in the curricula from an epistemological and concept theoretical point of view, are complemented by developmental psychological and cognitive understandings[10].

In order to mediate all the problems mentioned above, nowadays forms of teachimg are chosen which enable the students to work practically. For example they do exercises concerning searches in bibliographic databases and the retrieval tools of the World Wide Web in a laboratory environment with instruction and checks. Additionally, they use appropriate software products in order to deal practically with the structure of bibliographic databases, the production of controlled vocabulary and the procedures in automatic indexing after the students have been introduced to the relevant methods.

All in all, one can characterize the aims of current education in the fields of knowledge organization and information retrieval as approaches to gain competences in dealing with information systems and, if applicable, how to produce information systems in different areas of application, especially in the future. These competences should comprise the analysis and extraction of information in a structured way and varied methods of accessing this information. In order to take the starting specialization into account not all questions are obligatory for all students. This applies especially to subjects in the fields of data formats, data interchange, the application of automatic indexing as well as to the active shaping of retrieval systems.

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[10] Gödert, W.: Grundlegung einer konstruktivistischen Informationstheorie und ihre Konsequenzen für die Gestaltung von Informationssystemen. *Die digitale Revolution: Deutscher Dokumentartag 1996, Neue Universität Heidelberg, 24.-26.9.1996*; ed. W. Neubauer. Frankfurt a.M.: DGD, 1996. pp. 351-365. (DGD-Schrift: DOK-9); Gödert, W.: Information as a cognitive construction: a communication-theoretic model and consequences for information systems. *Knowledge organization*. 23(1996) no.4, pp.206-212.

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Wissensorganisation und Information Retrieval im Wandel
Konzepte für die Ausbildung in Deutschland

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Zusammenfassung:

Es wird ein Überblick gegeben, wie sich die Veränderungen im Bereich der Informationsverarbeitung und –technik auf die Gestaltung von Studienkonzepten im Bereich Wissensorganisation und Information Retrieval in deutschen bibliothekarischen Ausbildungseinrichtungen ausgewirkt haben. Dabei wird unterschieden in Bereiche der Veränderungen, die sich durch Verfahren und Anwendungen in der Praxis beschreiben lassen, und in Bereiche der Stabilität, die sich der Theorie und den Methoden zuordnen lassen.

Über die Inhalte der Ausbildung im Bereich der Wissensorganisation und Informationserschließung an den deutschen bibliothekarischen Hochschulen ist in der Literatur immer wieder berichtet worden[1]. Während der letzten Jahre wurden die Veränderungen angesichts der beschleunigten Entwicklungsdynamik nicht mehr kontinuierlich dargestellt, obwohl sich nicht allein die Inhalte, son-dem verstärkt auch die Konzepte verändert haben. Diese Veränderungen sind einmal Folge der Entwicklung, die sich in der Praxis der Bibliotheken durch Einführung der Online-Publikumskataloge (OPACs) und der recherchierenden Benutzung des Internet ergeben haben, andererseits aber auch Konsequenzen einer eher grundsätzlichen Neuorientierung, die Informationserschließung nicht mehr allein als Tätigkeit zur inhaltlichen Beschreibung (Erstellung von Daten) von Büchern sieht, sondern gleichzeitig das Recherchieren dieser Daten in elektronischen Suchumgebungen mitdenkt.

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[1] Vgl. z.B. die folgenden Schriften: **Sickmann, L.** (Hrsg.): Das Fach Sacherschließung in der bibliothekarischen Ausbildung: Vorträge der Fortbildungsveranstaltungen des Bibliothekar-Lehrinstituts in Verbindung mit der Gesellschaft für Klassifikation am 7. u. 8.12.1978 und dem Verband der Bibliotheken des Landes NW am 28. u. 29.3.1979. Köln: Greven 1980. V,107 S. (Arbeiten aus dem Bibliothekar-Lehrinstitut des Landes Nordrhein-Westfalen; H.50)
Gödert, W.: Klassifikatorische Inhaltserschließung: Ein Übersichtsartikel als kommentierter Literaturbericht. In: Mitteilungsblatt. VdB NW. N.F. 40(1990) H.2, S. 95-114.
Gödert, W.: Verbale Inhaltserschließung: Ein Übersichtsartikel als kommentierter Literaturbericht. In: Mitteilungsblatt. VdB NW. N.F. 41(1991) H.1, S. 1-27.
Schulz, U.: Zur Didaktik der inhaltlichen Erschließung in der Ausbildung von Diplom-Bibliothekaren. In: Bibliothek: Forschung und Praxis. 16(1992) H.3, S. 255-263.

Als Grundlage für die heutige Konzeption dient die Erkenntnis, dass wichtige und bewährte Inhalte auf der methodischen Seite beibehalten werden müssen, dass sie ergänzt werden um die methodische Grundlagen moderner, technisch unterstützter Verfahren der inhaltlichen Erschließung und des Information Retrieval. Beides muss durch Beispiele aus einer sich ständig verändernden Anwendungspraxis veranschaulicht werden, die nicht mehr allein Bibliotheken umfasst[2].
Die deutsche Ausbildung im Bereich Wissensorganisation und Informationserschließung hat auf der Methodenebene schon immer die internationalen Entwicklungen verfolgt und in die Curricula integriert, sicher weniger auf der Ebene der konkreten Anwendungen. Als Beispiel sei genannt, dass die Studie *Grundlagen universaler Wissensordnung* von *Ingetraut Dahlberg*[3] mit einer vergleichenden Analyse der weltweit wichtigsten Klassifikationssysteme einen starken Einfluss auf die Curricula und ihre methodische Ausgestaltung hatte. Die Berücksichtigung der Methode der Facettenklassifikation[4] und die Rezeption der Arbeiten der *Classification Research Group* wurde hierdurch stark gefördert. Dies bewirkte später auch eine intensive Auseinandersetzung mit dem *Preserved Context Index System (PRECIS)*, obwohl dieses Verfahren nie in deutschen Bibliotheken zum Einsatz kam[5].

Die Berücksichtigung internationaler Entwicklungen hat zu einer methodischen Basis geführt, die auch heute noch Bestandteil der Curricula ist. Diese Basis umfasst die Inhaltsanalyse, die erkenntnistheoretischen, strukturellen und linguistischen Grundlagen zur Herstellung verbaler und klassifikatorischer Dokumentationssprachen sowie die Prinzipien gleichordnenden und syntaktischen Indexierens und geht bis zu den Prinzipien und Hilfsmitteln postkoordinierenden Booleschen Recherchierens. In jüngster Zeit werden zunehmend linguistisch und statistisch basierte Verfahren im Retrieval sowie Verfahren des automatischen Indexierens berücksichtigt.

Informationserschließung hat so als Kerndisziplin der bibliothekarischen Ausbildung im Rahmen des Studiums auch Aufgaben übernommen, den Studierenden bestimmte Formen analytischen Denkens und des daraus abzuleitenden Schlussfolgerns zu vermitteln.
Für die klassifikatorische Erschließung bedeutet dies die Beschäftigung mit Fragen der konzeptionellen Gestaltung von Klassifikationssystemen (Was ist eine Klasse?, Was ist Struktur?), die Vermittlung der grundlegenden Eigenschaften präkombinierter Systeme, der Systeme mit Schlüs-

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[2] Die hier gegebene Darstellung orientiert sich an den Verhältnissen am Fachbereich Bibliotheks- und Informationswesen der Fachhochschule Köln, kann aber mit den notwendigen Anpassungen als stellvertretend für andere deutsche Hochschulen im Bereich der bibliothekarischen Ausbildung gesehen werden.

[3] **Dahlberg, I.:** Grundlagen universaler Wissensordnung: Probleme und Möglichkeiten eines universalen Klassifikationssystems des Wissens. Pullach : Verlag Dokumentation 1974. XVIII,366 S. (DGD-Schriftenreihe; Bd.3)
Vgl. auch: **Dahlberg, I.:** Major developments in classification.
In: Advances in librarianship. 7(1977), S. 41-103.

[4] Eine wichtige Rolle spielt hierbei das Buch:
Buchanan, B.: Theory of library classification. London: Bingley 1979. 141 S. (Outlines of modern librarianship; vol.11). In deutscher Übersetzung: **Buchanan, B.:** Bibliothekarische Klassifikationstheorie. Übers. von U. Reimer-Böhner. München: Saur 1989. 151 S.

[5] **Deutsches Bibliotheksinstitut** (Hrsg.): PRECIS: Für die Anwendung in deutschen Bibliotheken überarbeitete u. vereinfachte Form des syntaktischen Indexierungsverfahrens der British Library. Berlin: Dbi 1984. XXIX,310 S. ISBN 3- 87068- 835-1 (dbi-Materialien; Bd.35)
Vgl. auch die Rezension dazu von *J. Austin* in: International classification 12(1985) S. 41-43.

selung und des Facettenansatzes mit den Möglichkeiten ihrer jeweiligen spezifischen Anwendungsmöglichkeiten für Buchaufstellung, Kataloggestaltung und Retrieval.

Neben diesen mehr theoretischen Erörterungen müssen die Curricula die Verfahren berücksichtigen, die in der praktischen Anwendung der Bibliotheken zum Einsatz kommen. Dies sind im Bereich der klassifikatorischen Erschließung - bedingt durch die historische Entwicklung in Deutschland -eine Vielzahl von Systematiken für die Buchaufstellung und die standortfreie Erschließung[6]. Erst seit kurzer Zeit wird der zukünftige Einsatz der DDC für nationalbibliographische Dienstleistungen und Synchronisation mit internationalen Erschließungsprojekten diskutiert[7]. Im Bereich der verbalen Sacherschließung finden in den Curricula die *Regeln für den Schlagwortkatalog (RSWK)* sowie die der kooperativen Erschließungspraxis zu Grunde liegende *Schlagwortnormdatei (SWD)* Berücksichtigung. Über die Vermittlung von Kenntnissen des Regelwerkes hinaus stehen Fragen der prinzipiellen Eigenschaften verbaler Dokumentationssprachen (Begriffsbildung, Terminologiekontrolle, Begriffsbeziehungen und Möglichkeiten ihrer Repräsentation) zur koextensiven Repräsentation von Dokumentinhalten im Vordergrund. Regeln zur Schlagwortvergabe stehen dabei gleichberechtigt neben Prinzipien zur Thesaurus-Erstellung und -Anwendung.

Letzteres wird insbesondere aufgegriffen, wenn Ansätze und Verfahren behandelt werden, die Daten der Inhaltserschließung in Online-Umgebungen suchbar zu machen. Der technologische Wandel hat hierbei eine Neuorientierung bewirkt. Standen ehemals Ordnungsverfahren für die Herstellung von Zettelkatalogen oder Listen in Bandkatalogen im Vordergrund, so treten nun Retrievalverfahren hinzu. Dabei gilt es, die Suchmöglichkeiten in einem breiten Spektrum von Retrievalumgebungen zu berücksichtigen: OPACs, alle Formen von Literaturdatenbanken – gleich ob CD-ROM- oder Online-Datenbanken, in Auswahl Faktendatenbanken und insbesondere das Internet mit seinen verschiedenen Angeboten, den Verzeichnisdiensten und den Suchmaschinen.

Bei der Behandlung von OPACs ist heute die Spannweite von In-house-Lösungen bis hin zu WebOPACs zu berücksichtigen, Fragen der Suchfunktionalität treten neben Nutzerstudien und Möglichkeiten des Datenaustausches.

Bestimmte Fragen sind allen Suchumgebungen gemeinsam, haben aber unterschiedliches Aussehen. Besonderer Wert wird daher auf die Behandlung struktureller Gemeinsamkeiten gelegt. Dies soll die Studierenden in die Lage versetzen, sich auf einer methodischen Metaebene Kompetenzen anzueignen, um später selbständig die Entwicklungen verfolgen zu können.

Zentrale Fragen sind in diesem Zusammenhang das Zusammenspiel von Maßnahmen auf der Vokabularseite zur Verbesserung der Retrievalergebnisse und der Möglichkeiten, die Werkzeuge und Verfahren des Information Retrieval – ggf. auch als Ersatz – spielen können. Dies umfasst z.B. die Retrievaleigenschaften von unkontrolliertem Vokabular und die Eigenschaften verstichworteter normierter Deskriptoren.

Behandelt werden auch die Möglichkeiten zur Herstellung semantischer Navigationsmöglichkeiten auf der Basis normierten Vokabulars. Dies beinhaltet die Möglichkeiten, die Klassifikationssysteme als Strukturierungsmittel für Navigationsvorgänge oder deren geeignet gestaltete Register für einen suchenden Zugriff spielen können.

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[6] **Nohr, H.:** Systematische Erschließung in deutschen Öffentlichen Bibliotheken. Wiesbaden: Harrassowitz 1996. XI,140 S. (Beiträge zum Buch- und Bibliothekswesen; Bd.37)
Lorenz, B.: Systematische Aufstellung in deutschen wissenschaftlichen Bibliotheken. 3., durchgehend überarb. u. erw. Aufl. Wiesbaden: Harrassowitz 1995. 123 S. (Beiträge zum Buch- und Bibliothekswesen; Bd.21)

[7] Einführung und Nutzung der Dewey Decimal Classification (DDC) im deutschen Sprachraum: Vorgelegt von der Arbeitsgruppe Klassifikatorische Erschließung im Auftrag der Konferenz für Regelwerksfragen. Frankfurt: Die Deutsche Bibliothek 2000. 75 S.

Eine wichtige Rolle spielen als Beispiele die Suchwerkzeuge des Internet. Die bei den Studierenden inzwischen vorhandene grundsätzliche Bekanntschaft mit diesen Hilfsmitteln kann genutzt werden, um durchaus anspruchsvollere Themen zu behandeln. So können z.B. an *Yahoo!* verschiedene Probleme der Gestaltung systematischer Zugänge diskutiert werden. Die meisten Suchmaschinen liefern gute Beispiele für Retrievaleigenschaften von Freitext und den Prinzipien des Relevance Ranking. Dies kann ergänzt werden um die speziellen Eigenschaften von Suchmaschinen wie *Google* (Citation-Ranking) oder *AskJeeves* (Computerlinguistik) und mit Produkten wie dem *Knowledge Finder®* in Verbindung gebracht werden. Die Beispielwelt ist somit vielfältiger geworden und lässt bekannte Verfahren – wie etwa das Citation Indexing – in neuem Licht erscheinen.

Die verstärkte Betrachtung der Informationserschließung aus der Sicht des suchenden Nutzers hat den Einsatz von Verfahren des Automatischen Indexierens in Bibliotheken interessant gemacht[8]. OPACs in deutschen Bibliotheken verfügen nicht zu 100% über Daten der Inhaltserschließung. Daran wird sich trotz verschiedener Vorhaben im Bereich der retrospektiven Digitalisierung und der verstärkten Berücksichtigung von Fremddaten in absehbarer Zeit nichts Grundsätzliches ändern. Verfahren der automatischen Indexierung können unter Ausnutzung intellektuell erstellten und strukturierten Vokabulars eine homogene Situation für das Retrieval schaffen. Es zeigt sich bei der Auswahl dieser Verfahren allerdings, dass hierbei eine grundsätzliche Sprachabhängigkeit zu beachten ist, sollen die Ergebnissen den Anforderungen deutschsprachiger Nutzer genügen. Dies hat zur Entwicklung spezifischer Indexierungsverfahren für deutschsprachige Dokumente geführt[9], die Gegenstand der Vermittlung sind. Unterstützt werden muss die Behandlung dieser Verfahren durch die Vermittlung allgemein- und computerlinguistischer Grundlagen.

Um den Sinn und Nutzen der automatischen Indexierung im Vergleich und in Ergänzung zu anderen Vorgehensweise auch methodisch korrekt diskutieren zu können, haben die Methoden zur Durchführung von Retrievaltests sowie deren Ergebnisse Eingang in die Curricula gefunden. Dabei wird ein Spektrum angeboten, das von speziellen Untersuchungen in bibliothekarischen OPACs bis hin zu den Methoden und Ergebnissen der *Text Retrieval Conferences (TREC)* reicht.

Inhaltliche Erschließung kann weder in Bibliotheken noch in anderen Anwendungsumgebungen weiter allein auf den Dokumenttyp Buch bezogen werden, sondern muss andere mediale Informationsträger (z.B. Bilder, Filme, Tonträger, Web-Seiten) mit berücksichtigen. Dabei sind auch die Grenzen der jeweiligen Anwendungsumgebung fließend geworden: für die Vermittlung stehen neben spezialisierten In-house-Lösungen für definierte Nutzergruppen kooperative Bemühungen im Bibliotheksbereich oder Projekte zur Herstellung webbasierter Subject Gateways oder Informationsportale mit Partnern aus verschiedenen Fachdisziplinen oder der Informationswirtschaft.

Erschließungsprojekte im internationalen Raum müssen zunehmend unter multilingualen Anforderungen gesehen werden, so dass auch diese Probleme auf der prinzipiellen methodischen wie der anwendungspraktischen Ebene Eingang in die Curricula gefunden haben.

Ansätze zur Standardisierung (Datenformate, Normdateien, Metadaten) und Verfahren zum Datenaustausch finden zunehmend Berücksichtigung. Es kann erwartet werden, dass auch Konzepte wie die *Extensible Markup Language (XML)* zukünftig größere Bedeutung bekommen. Dabei wird immer stärker abzuwägen sein, welchem Bereich größere Aufmerksamkeit geschenkt wird: den spezifisch bibliothekarischen oder allgemeinen Ansätzen zur Problemlösung. Es gibt sicher derzeit einen Trend zugunsten allgemeiner Ansätze; es bleibt jedoch eine Herausforderung, die spezifischen bibliothekarischen Notwendigkeiten nicht zu kurz kommen zu lassen.

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[8] **Gödert, W., K. Lepsky:** Semantische Umfeldsuche im Information Retrieval.
In: Zeitschrift für Bibliothekswesen und Bibliographie. 45(1998) H.4, S. 401-423.

[9] **Lepsky, K.:** Automatische Indexierung zur Erschließung deutschsprachiger Dokumente.
In: nfd Information - Wissenschaft und Praxis. 50(1999) H.6, S. 325-330.

Dieser Trend zeigt sich in jüngster Zeit verstärkt im Verständnis von Wissensorganisation und Information Retrieval in den Studienangebote der deutschen Hochschulen, die der Informationswirtschaft gewidmet sind. In diesen Studienangeboten werden die Verfahren der inhaltlichen Erschließung und ihre Ergebnisse nicht allein als Voraussetzung für den individuellen Informations- und Wissenserwerb gesehen, sondern sie werden als Teil einer Wertschöpfungskette unter ökonomischen Randbedingungen und damit als Teil des Wissensmanagements gesehen. Daraus folgt die Beschäftigung mit neuen Methoden und Verfahren, aber auch die Behandlung der Frage, was unter Wissen und Information im Kontext der Wissensorganisation und des Information Retrieval zu verstehen ist. Hierdurch erfahren z.B. Überlegungen, die aus erkenntnis- und begriffstheoretischer Sicht schon traditionelllerweise für Inhaltsanalyse und Wissensstrukturierung in den Curricula verankert waren, eine Ergänzung um entwicklungs- und kognitionspsychologische Sichtweisen[10].

Zur Vermittlung aller voranstehend genannten Fragestellungen werden verstärkt Veranstaltungsformen genutzt, die eine praktische Arbeit der Studierenden ermöglichen. So werden in Laborpraktika nicht allein Rechercheübungen in bibliographischen Datenbanken und den Suchwerkzeugen des World Wide Web absolviert, es werden ebenso unter Zuhilfenahme geeigneter Softwareprodukte die Strukturierung und der Aufbau bibliographischer Datenbanken, die Herstellung strukturierten Vokabulars und die Vorgehensweise beim automatischen Indexieren im Anschluss an die Vorstellung der jeweiligen Methoden praktisch behandelt.

Die Ziele der gegenwärtigen Ausbildung im Bereich Wissensorganisation und Informationserschließung lassen sich zusammenfassend als Bemühungen charakterisieren, über den aktuellen Zeitpunkt hinausreichende Kompetenzen im Umgang mit Informationssystemen und ggf. zur Herstellung von Informationssystemen in unterschiedlichen Anwendungsumgebungen zu erwerben, die die Informationsanalyse und -extraktion, die Fixierung von Informationen in strukturierter medialer Form und vielfältige Methoden ihres Zugriffs umfassen. Um einer einsetzenden Spezialisierung Rechnung zu tragen, werden nicht alle Fragestellungen für alle Studierenden zur Pflicht gemacht. Dies gilt insbesondere für Themen im Bereich der Datenformate, des Datenaustausches, der Praxis der automatischen Indexierung sowie der aktiven Gestaltung von Retrievalsystemen.

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[10] **Gödert, W.:** Grundlegung einer konstruktivistischen Informationstheorie und ihre Konsequenzen für die Gestaltung von Informationssystemen.In: Die digitale Revolution: Deutscher Dokumentartag 1996, Neue Universität Heidelberg, 24.-26.9.1996. Hrsg.: W. Neubauer. Frankfurt a.M.: DGD 1996. S. 351-365. (DGD-Schrift: DOK-9)

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Teaching classification to fit a modern and sustainable LIS curriculum: the case of Croatia

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Abstract:

Library classification in the Croatian library school at the Department of Information Sciences, University of Zagreb has an important place in the department's curriculum. This is due to the fact that classification is the most important indexing language in Croatian libraries, documentation centres and services and its role has not been undermined by library automation is the case elsewhere. The course Classification and Classification Systems has undergone many changes since the school was established in 1976. One of the most important objectives of the course, besides introducing classification as a tool, is to teach about content analysis and classification as a process. Another important goal of the course is to teach students how to adapt and use classification for different purposes and in different environments. The current syllabus embraces the use of classification in information organisation and presentation in different kinds of collection from book and non-book materials to information resources on the Internet and even more importantly, the course covers the application of classification in information retrieval and discovery. It is the intention of the course to contribute to the education of librarians and will enable their skills to be applied in the wider area of the information profession.

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1. Background

One would expect that the importance of library classification would ensure the steady development and expansion of classification research and its continuous presence in the LIS curriculum. However, the teaching of classification in many LIS schools lost its importance in the 1980's. Centralized cataloguing services, and an avoidance of expensive indexing methods , as well as the wider application of library systems in the eighties resulted in decline of both, application and teaching of classification (see for instance Buckland, 1990, Weinberg, 1995 and Downie, 1999).

Internet technology in the nineties, however, created the need for information organisation skills and it became necessary to find a better solution for information discovery, either by developing new indexing techniques and languages or by adapting existing ones, such as classificaton, to suit the new environment. The knowledge regarding the theory of classification, classification systems and their practical application, becomes more important with new technological developments (Kwasnik, 1999). These have expanded the field of application and created new functional requirements for classification systems. LIS education can greatly influence the future of information organisation on the Internet by educating more professionals with a thorough understanding of indexing tools and classification in particular. Each library school has an equal responsibility in contributing to this mission irrespective of its geographical or cultural background. This paper will illustrate how the LIS School at Zagreb University, Croatia, carries out the objective of teaching library classification in order to contribute to its wider application and survival.

1.1. LIS Education in Croatia

The first Library school in Croatia was established in 1975 at the Faculty of Philosophy, University of Zagreb, offering undergraduate degrees in librarianship. The curriculum was based upon American and British LIS education from the seventies, with the influence of current European and Croatian library practice. In 1985, Librarianship became a part of the Department of Information Sciences and this directed its future development towards the broader area of information studies. Over time, the programmes were enriched with postgraduate courses and a part-time programme in librarianship was introduced. Consequently, changes to the curricula in the years following were influenced by the fact that librarianship started to view itself as a part of the information studies field rather than just being concerned with the education of library staff.

Today the Department of Information Sciences delivers both undergraduate and postgraduate degree programmes of study in the area of Librarianship, Informatics, Archive and Museum studies. Graduating with a B.A. in librarianship is the only way of acquiring professional librarian status in Croatia today, which is a small country with 4 million inhabitants and less than two thousands libraries. Until recently, when undergraduate degree programme in librarianship were established at the University of Osijek, the Zagreb department was the only library school in Croatia.

Twenty years ago the lack of academic staff made LIS education more dependent upon the professional community. Most of the lecturers were librarians with certain specialisations and considered their mission to be, primarily, the education of future library staff. Teaching of, for example, the indexing course was based almost exclusively on the skills and knowledge a librarian needs in a Croatian public library, as staff teaching this subject happened to have that provenance. The department's vision and objectives have changed in the last three decades as more academic staff have not only library experience, but also undergraduate, postgraduate and PhD degrees in library and information studies.

At the moment LIS education in Zagreb seems to be more advanced than current library practice, the development of which has been held back by the harsh economic situation in Croatia (Lasic-Lazic; Slavic, 2000). It is the hope of academic staff that by preparing professionals for a more technologically demanding environment, this may help improve library practice in the future. This may also help the professional community to apply the necessary skills outside a traditional library environment.

2. The use of classification in Croatian libraries

The role of classification in the Croatian LIS curriculum is very much determined by general practice in European and in particular Croatian libraries. The old Sayers differentiation between the 'bibliothecal' and 'bibliographical' use of classification is very much a reality in Croatian libraries (Sayers, 1935). Library classification has an important place in Croatian libraries as classification is used not only for shelf arrangement but more importantly for information retrieval supported initially by classified catalogues and more recently by OPACs. Due to its important role, not only in providing subject access to the collection, but in underpinning the entire work of librarians in supporting acquisition, collection organisation, management, and maintenance (e.g. weeding, inventory revision), as well as reference work, classification was considered to be too important to be carried out by cataloguers. It was performed by subject specialists who usually divide their work between the reference desk and the classification department. The Croatian approach to teaching classification, therefore, is very different from, for instance, the American one, that can have cataloguing and classification combined in one single course module. In Croatia, due to its important role, classification is naturally established as a separate module that was from the beginning, some thirty years ago, taught according to the approach influenced initially by the German tradition and theory of subject catalogues (der Sachkatalog, der systematische Katalog, der Schlagwortkatalog).

There is another reason for the important place of classification in Croatian libraries. Croatia has always maintained strong links with other South Slavonic cultures and languages (Serbian, Slovenian, Macedonian) in the historical, cultural and political boundaries of South-East Europe. When it comes to information exchange, alphabetical indexing languages were not favoured by Croatian librarians in this multilingual and multiscript environment. Library classification proved to be far more useful and it was applied in the full scope of an indexing language. This became much more apparent when in the fifties Universal Decimal Classification UDC) became the official classification system for the national, public, academic and most special libraries in the former Yugoslavia. UDC became literally universal as it bridged different libraries, different collections, different languages and different scripts in this multinational, multilingual and multiscript environment. The Croatian National Bibliography as well as many secondary publications in the wide area of scholarly communication uses UDC (articles in most Croatian scientific and research journals contain a UDC classification number). In Croatian libraries today, library services ranging from acquisition and information services to collection management and selective dissemination of information rely upon UDC and in this environment, it is used as the prevalent indexing tool.

3. The paradox of undeveloped countries

Of all the negative effects troublesome and poor economic environments have on library automation in Croatia, a positive consequence is that, having inadequate system support, librarians continue to use their core library skills. As they are unable to search, find or download a record that may exist in a Croatian National Library system, Croatian librarians have to catalogue and classify the same book in their local application as a part of their daily routine. Furthermore, as they lack funds for vendor library systems, libraries often engage in a lengthy and thus more expensive process of incrementally building their own library systems. This permits librarians to influence the system being built, therefore, whenever the librarians involved ask for better solutions in the subject approach, this often results in better exploitation of library classification or subject heading systems. Contrary to what has happened in the rest of the world, classification has not lost its important role in the process of library automation, and paradoxically, Croatian librarians may still need to know more about the practical issues of using classification in the automated library system.

In terms of management in poorly automated Croatian Libraries, the importance of the Internet can appear as another paradox. Lacking a national library network, unified catalogues and national information communication infrastructure, librarians are actually likely to be more dependent on access to the Internet in order to be well informed, to find necessary information when cataloguing and classifying books or when using OPACs worldwide. The Internet can often act as a 'backup' for the lack of other information resources. In using the Internet librarians need to be well acquainted not only with their own systems of information organisation and access but also with world recognised and accepted methods and tools. This reality greatly influenced the teaching of classification and will be explained further in the syllabus of *Classification and Classification systems*.

4. Teaching classification at the University of Zagreb

There are currently two teaching modules focusing on classification that are compulsory at the undergraduate level: *Theory of Classification* and *Classification and Classification Systems* but only the latter is related to classification as an indexing language, and will be further explained. The former is an introductory course that consists of only 12 two hour lectures covering philosophical and logical background of classification and its wide application in science, research and practice. *Classification and Classification System,* however, can be described as a module as it consists of 24 lectures and 24 practical tutorials that are being delivered throughout the academic year.

4.1. Course Objectives and coverage

The *Classification and Classification Systems* module covers some of the general issues in indexing and it is designed to enable students to understand the principles of content analysis and collection organisation based on content description. The purpose of this module is to introduce indexing and retrieval that bridges old library traditions and the wider scope of information discovery. Usually, classification schedules are merely the source for real practical 'application schema' that one library designs for its particular library purpose, its collection and its patrons. Although a document can have only one location in the collection it has to be retrieved by any relevant subject description. Therefore, teaching classification has to cover two different levels: collection organisation and information retrieval. Also a collection to which a library classification is applied can consist of objects as well as of any kind of document. Apart from those printed on paper it can contain documents stored on any kind of multimedia or digital carrier and may be in any kind of digital format. It is an important objective of the course to teach the students that a library classification system is a flexible tool that can and should be applied to suit ones particular needs. To be able to use classification in a different and more flexible manner, an indexer has to understand the philosophy and structure behind library classification, hence the difference between enumerative, semi-enumerative and analythico-synthetic classification is taught. Therefore, although the stress is put on UDC, students are also introduced to other widespread classification systems such as Dewey Decimal Classification (DDC), Library of Congress Classification (LCC), Bliss Bibliographic Classification (BC), Colon Classification (CC) and Cutter Expansive Classification (EC). While CC and BC are introduced primarily because of their faceted structure and EC because of its important place in the history of classification, DDC and LCC are analysed in a more practical and comparative manner. After being acquainted with general classification systems students are briefly introduced to special classifications (e.g. Decimal Classification for Forestry, INSPEC and ICOM Classification) that are mostly analysed from the point of view of their structure and their practical value.

Related to library automation and particularly related to the Internet, the classification syllabus is extended to cover the following important issues:

- classification as a indexing retrieval tool in an on-line environment

- translation of the classification to a natural language
- use of library classification in resource discovery on the Internet: subject gateways and metadata

In covering these issues the traditional use of classification that still exists in a number of Croatian libraries is compared with its application in an integrated library system. The field of application of library classification is wider than it was several decades ago. It is a course objective to enable students to understand and be able to use classification in the widest scope of its application for:

- **systematic organisation of information**
  - book and non book: multimedia, realia, digital collections
  - bibliographic records in the bibliographies, databases
  - web resources

- **information retrieval in databases, OPACs and on the Internet**
  - searching classification numbers
  - browsing hierarchical classification structures
  - improving recall and precision, and providing a context for search terms

- **selective dissemination of information**

- **classification as a basis and help in development of alphabetical indexing languages and its use as a "switching language" in the multilingual environment.**

In the first semester, lectures and tutorials in this syllabus are planned to proceed simultaneously but at the same time to be somewhat independent. Initially, lectures focus on the history, theory, and structure of library classification in general, and tutorials start immediately with an introduction to the UDC and its application. Students start to do practical classification after three introductory tutorials to the UDC schedules and spend each of the next ten tutorials classifying a different main class in UDC. An additional two tutorials are then devoted to non-book materials, objects etc. Lectures are given in parallel with an introduction to other classification systems and after that with problems of the classification in an on-line environment. In the second semester both lectures and tutorials are devoted to using classification in an on-line environment and students start to use the specially prepared CDS ISIS database called KLAS. They enter their examples into the database and practice searching and browsing. Using this database, the students explore the main issues around handling, sorting, and searching a synthetic classification such as UDC (see further in Lasic-Lazic, Slavic, 1998). The objective of this exercise is to demonstrate the full extent of the capacity and suitability of classification in retrieval. Students analyse the need to search each meaningful element of composed classification numbers as well as to search classification using words. Several tutorials are devoted to the translation of classification numbers to words and a chain indexing technique is exercised along with post coordinate searching using Boolean logical operators. At this stage lectures proceed with a subject alphabetical index to classification and the use of classification in thesaurus building.

In tutorials towards the end of the course, students are introduced to different Croatian library OPACs and a number of web OPACs and they analyse their provision for browsing and searching classification. Having been well acquainted with both a classification system (i.e. UDC) and its retrieval capacity this part of the course tutorials are devoted to introducing the issues of classification management in an integrated library system. The end of the course is devoted to Internet search gateways that use classification and to the use of classification in general and special metadata schemas.

At the end of the module students have to submit a short paper on any general classification system (apart from UDC) or make a comparison between them. A description of five real documents classified according to the five different general classification systems is also required. After paper work has been submitted and evaluated, students are allowed to attend written exams that consist of 50 multiple choice questions on content analysis, special and general classification systems, and UDC in particular. Students with satisfactory marks are allowed to approach the final and the main part of the exam - the interview. This interview is an oral examination and will cover all the student's work during the year and practical examples he/she did. The interview also covers the paper submitted and finally several questions are posed based on the reading list.

5. Conclusion

Croatian librarianship comes from a small community and therefore borrows from more developed international traditions. This encompasses professional communication and exchange as well as education. Placed between Western and Eastern European traditions and also acquainted with the developed American LIS environment, Croatian librarians strive to take the positive aspects from all of these influences. The Croatian tradition in teaching classification has a good foundation in its wide approach to classification as a retrieval and knowledge organisation tool. Being outside the main stream of library automation, LIS education in Croatia tries to create an awareness of technologically related pitfalls and to preserve the core values of traditional library skills. At the same time the present undergraduate curriculum, as has been shown using the example of the course *Classification and Classification Systems,* tries to anticipate a wider application of indexing skills and their usage in the future networked environment. The fact that the Croatian library tradition fully appreciates classification as an indexing tool and that Croatia is detached from mainstream library automation is helpful in establishing a course entirely devoted to classification with a wider range of topics. Croatian librarians, lacking networked library resources, are likely to be more dependent on the Internet and hence the course in classification uses the global network both as a teaching aid and as the field of classification application. Lectures and tutorials are both devoted to teaching classification as a powerful tool whose application exceeds the boundaries of its bibliographic scope.

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Enseñanza de la recuperacion y acceso por tema en las Escuelas de Bibliotecologia Mexicanas

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Resumen:

Las búsquedas por tema es una de las más importantes características de los catálogos para obtener información útil. La búsqueda por tema en los catálogos originalmente estuvo basada en el uso de lenguajes controlados pero los catálogos en línea han incluido nuevas opciones como la búsqueda por palabras clave. Este hecho significa que los estudiantes de bibliotecología deben aprender los atributos de los lenguajes libres y controlados para llevar a cabo con éxito el trabajo de catalogación y referencia. Este documento muestra como el acceso temático ha cambiado en los catálogos en línea y en "web" y como la enseñanza de la recuperación y acceso por tema ha sido considerada dentro de la educación bibliotecológica, particularmente en los programas de estudio de las escuelas de bibliotecologia mexicanas. Asimismo, se proponen algunas acciones para mejorar la enseñanza de estos asuntos.

Las colecciones de la biblioteca ya no únicamente son libros sino diferentes tipos de entidades de información (imágenes , grabaciones y objetos digitales, entre otros) han surgido y han sido incorporados dentro de la colección de la biblioteca. Asimismo, muchas organizacione e individuos están utilizando la Internet para generar y distribuir información. La cantidad de recursos electrónicos que se encuentran disponibles en la "web" se ha incrementado substancialmente en los últimos años y existe una fuerte necesidad para incluirlos dentro de la colección de la biblioteca y consecuentemente, incluir sus registros dentro del catálogo. Adicionalmente, la forma física del catálogo ha cambiado de catálogos de tarjetas a catálogos en línea y en "web." Anteriormente, el catálogo sólamente era accesible en la biblioteca pero ahora se puede accesar en muchos lugares fuera de ésta. Por otra parte, los usuarios de una biblioteca pueden recuperar unformación no sólamente acerca de los acervos de su biblioteca sino también pueden examinar los acervos de otras. Además, los nuevos catálogos ofrecen una variedad de opciones en sus puntos de acceso. Los catálogos de tarjetas han cedido su lugar a catálogos en línea y en "web" que han incorporado nuevas ocpiones de búsqueda, particularmente búsquedas temáticas.

Acceso temático en el catálogo de la biblioteca

En los catálogos de tarjetas, las únicas opciones para recuperar información acerca de los acervos de una biblioteca eran el autor, el título y la materia. En comparación, en los catálogos en línea y en "web" es posible efectuar búsquedas por las palabras del título o las incluidas en cualquier otro campo del registro. En esta forma, las posibilidades de acceso temático en los catálogos en línea y en "web" no están limitadas a los encabezamientos de materia, un lenguaje controlado, sino que son ampliadas a palabras claves, principalmente aquellas del título, lo cual es el constituyente básico de los lenguajes libres. El uso de estas dos alternativas para buscar y recuperar información acerca de un tópico particular no es algo totalmente nuevo puesto que los índices y resúmenes que cubren la literatura publicada en diversos campos del conocimiento han utilizado lenguajes controlados y libres por muchos años. Asimismo, diversos argumentos con relación a las ventajas y desventajas de estas dos opciones han aparecido en la literatura bibliotecológica por muchos años (Lancaster, 1991). Por otro lado, las búsquedas por lenguaje libre o natural han sido incorporadas en los motores de búsqueda y portales para llevar a cabo la recuperación temática. Con relación a estas nuevas herramientas de recuperación, Thomas (2000) comenta: "Con el incremento de la "web" estimado en cerca de diez millones de páginas semanalmente, la tarea de indizar los recursos de Internet es ciertamente gigantesca, y no es algo que pueda ser realizado aún por el más activo equipo de catalogadores. En lugar de apoyarse en el catálogo para identificar y recuperar páginas web relevantes, los usuarios están utilizando los portales."

Ciertamente, los portales se han convertido en una herramienta de navegación y búsqueda muy popular y algunas bibliotecas los están desarrollando. Acerca de su popularidad y adopción por las bibliotecas, Thomas (2000) menciona: "Reconociendo que algunos usuarios podrían preferir conectarse directamente con los recursos en línea sin pasar a través del catálogo, algunas bibliotecas han desarrollado medios de acceso separados para los recursos en red. Estos medios de acceso facilitan el acceso a los materiales electrónicos seleccionados por la biblioteca, proporcionando un punto de entrada único, organizándolos por categorías y utilizando metadatos, derivados a veces de los registros del catálogo, para ayudar a los usuarios a localizar los recursos en red."

Los portales están siendo desarrollados por las bibliotecas y tienen una amplia aceptación por los usuarios; sin embargo, al igual que en los motores de búsqueda, sus opciones de recuperación tematica están basadas principalmente en un lenguaje libre o natural, lo cual tiene ventajas pero también desventajas. La riqueza y variabilidad del lenguaje libre conduce, irónicamente, a una ambiguedad. El uso de un número ilimitado de palabras libres dentro del proceso de indización y búsqueda conduce a esfuerzos inútiles y a un cierto grado de error en la recuperación de la información (Clevenland y Cleveland, 1991). Adicionalmente, el uso de textos libres incrementa la cantidad de material que se recupera, pero reduce la precisión de la información recuperada (Lancaster, 1986, 1991).

A diferencia del lenguaje libre, los lenguajes controlados presentan mayores ventajas. Gerhan (citado por Peters, 1991) encontró que los usuarios del catálogo recuperan más registros con menos intentos haciendo uso de los encabezamientos de materias incluidos en el LCSH. Adicionalmente, analizando un catálogo que contenía una considerable cantidad de materiales en un idioma diferente al utilizado en el proceso de indización, Martínez-Arellano (1999) encontró que una gran cantidad de materiales no podían ser recuperados haciendo uso de lenguaje libre. Haciendo referencia a la importancia del vocabulario controlado, Tillet (2000) señala: "El control de autoridad permite obtener "precisión y exhaustividad", los cuales están ausentes en las actuales búsquedas en la "web." El control de autoridad proporciona precisión para recuperar sólamente aquellos registros o materiales de interés, y la estructura global de las referencias cruzadas del control de autoridad asegura una recuperación exhaustiva de todos los materiales relevantes, además de la navegación para localizar materiales bibliográficamente relacionados. No puede ser suficientemente enfatizado que esta característica de los catálogos en línea, añade un tremendo valor a las búsquedas del usuario y al proceso de recuperación. No más tanteo a través de miles de resultados recuperados y arreglados automáticamente por rango para encontrar cualquier cosa cercana a lo que estamos buscando, a menos de que nosotros lo queramos. Vamos a darles a los usuario las opciones para búsquedas más precisas, si ellos lo desean."

En un ambiente de redes, las bibliotecas ya no poseen la mayoría de los recursos electrónicos sino que sólamente tienen acceso a ellos. En esta situación, la descripción física de los recursos electrónicos juega un papel secundario, siendo más importante la descripción de su contenido. Una adecuada representación de los tópicos que cubren una entidad de información puede permitir a los usarios evaluar sus registros para decidir que recursos electrónicos es más conveniente accesar. Los Encabezamientos de Materia de la Biblioteca del Congreso (Library of Congress Subject Headings, LCSH) han sido recomendados como una importante herramienta que puede ser utilizada en un ambiente de redes para recuperar recursos electrónicos por tema. Entre las razones de esta recomendación, Chan (2000) menciona las siguientes: "(1) LCSH es un vocabulario rico que cubre todas las áreas temáticas, siendo el más grande vocabulario general para indización en inglés; (2) existe un control de los sinónimos y los homógrafos; (3) contiene abundantes relaciones (referencias cruzadas que indican relaciones) entre los términos; (4) es un sistema precoordinado que asegura precisión en la recuperación; (5) facilita la revisión de conceptos múltiples o temas multifacéticos; y (6) habiendo sido traducido o adaptado como un modelo para desarrollar sistemas de encabezamientos de materias por muchos países alrededor del mundo, LCSH es, de facto, un vocabulario controlado universal".

Todos los argumentos anteriormente mencionados, muestran la importancia que los vocabularios controlados tienen para la recuperación tematica en un ambiente de redes. "La razón es que una catalogación efectiva involucra a los vocabularios controlados y el apego a los estandares que han evolucionado en los pasados cien años" (Gorman, 2000). Puesto que los vocabularios controlados son herramientas importantes de recuperación temática; entoces, también es importante revisar como las escuelas de bibliotecologia están educando a los bibliotecólogos para manejar estandares tradicionales de catalogación, particularmente los relacionados con la recuperación por tema y los lenguajes controlados. Sólamente si los estudiantes de bibliotecología aprenden los pricipios básicos relaiconados con estos asuntos, podrán manejar adecuadamente la organización y recuperación de los recursos electrónicos.

Enseñanza de la organización de la información y el acceso temático

El acceso y la recuperación por tema han sido integrados dentro del contenido de muchos de los cursos impartidos en las escuelas de bibliotecología. En una encuesta llevada a cabo entre los programas de maestría acreditados por la American Library Association en los Estados Unidos y Canadá, Cortés Arriaga (2000) encontró 456 cursos relacionados con estos asuntos. Los títulos de tales cursos incluían términos como recuperación de la información, búsqueda en línea, estrategias de búsqueda, almacenamiento y recuperación de la informacion, servicios bibliográficos en línea, organización de la información, indización, acceso a bases de datos y recuperación de informacion en línea. Muchos cursos relacionados con el acceso y recuperación por tema se encuentran ubicados en el área de servicios, siendo los cursos relacionados con los procesos técnicos o la organización de la información más pocos que los primeros. También se encontraron pocos cursos cuyo título y contenido estaba particularmente centrado al acceso temático. Algunos de esos cursos fueron, entre otros, los siguientes: Análisis temático y construcción de tesaurus (The University of Western Ontario), Indización y registros (State University of New York at Buffalo), Indización (University of Wisconsin-Maddison), Recuperación de textos; Motores de Búsqueda en la web (Iowa University), Indización y resúmenes; Construcción y diseño de tesaurus (Pratt Institute).

Aunque los aspectos relacionados con el acceso temático han sido integrados a algunos de los cursos de las escuelas de bibliotecología, su inclusión ha sido principalmente en aquellos cursos relacionados con el proceso de recuperación. La importancia dada al proceso del almacenamiento ha declinado pues la cantidad de los cursos de catalogación ha decrecido en los últimos años. Un estudio por Espillane (citado por Waiss y Carstens, 2001) muestra que en 1998 sólamente 52.1% de las escuelas de bibliotecologoía requerían un curso de catalogación comparado con 77.1% en 1986. No obstante lo anterior, el dar a los estudiantes de bibliotecología las bases de la catalogación y el acceso temático los preparará para ayudar a los usuario a encontrar la información que están buscando. Un estudio llevado a cabo por Banks (citado por Waiss and Carstens, 2001) mostró como el aprendizaje de los rudimentos de la catalogación ayuda a los usuario a localizar los materiales que necesitan dentro del catálogo. Con relación a la enseñanza del acceso y recuperación por tema, Romero (1995) ha puntualizado algunas recomendaciones: "Los educadores deberán asegurarse que los estudiantes no sólamente entiendan como utilizar las distintas herramientas de encabezamientos de materia, para que los encabezamientos sean válidos, sino también deberán enfatizar como analizar el contenido temático de los materiales para que puedan ser asignados encabezamientos apropiados y válidos."

Adicionalmente, este autor menciona: "Cuando se eduque a los estudiantes en la catalogación por tema y en la clasificacion, los educadores necesitan reforzar el objetivo general del análisis temático en dos sentidos, en su aplicación y en el acceso. Los educadores deberán asegurarse que en adición al conocimiento de como usar las herramientas, los estudiantes también deberán adquirir las habilidades necesarias para evaluar el contenido temático de un material para que la recuperación no se vuelva un ejercicio de adivinanza." Los argumentos anteriormente señalados muestran la necesidad de reforzar la enseñanza relacionada con la organización de la información, particularmente aquellos aspectos ligados al análisis del contenido tematico de las entidades de informacion para lograr una adecuada recuperación de ellas.

Enseñanza de la organización de la información y el acceso temático en las escuelas mexicanas de bibliotecología

Actualmente existen seis escuelas de bibliotecología en México que preparan profesionales en esta disciplina. Estas escuelas proporcionan educación a nivel licenciatura y su principal objetivo es formar profesionales que sean capaces de seleccionar, adquirir, catalogar, clasificar y proporcionar información a todo tipo de usuarios. Las primeras escuelas mexicanas de bibliotecología fueron establecidas aproximádamente hace 50 años, la Escuela Nacional de Biblioteconomía y Archivonomía en 1945, y el Colegio de Bibliotecología de la Universidad Nacional Autónoma de México en 1956. Estas dos escuelas fueron establecidas en la capital del país y actualmemte existen otras cuatro escuelas de bibliotecología en diferentes universidades mexicanas: la Escuela de Bibliotecología e Información de la Universidad Autónoma de San Luis Potosí, el Colegio de Bibliotecología de la Universidad Autónoma de Nuevo León, el programa de Ciencias de la Información Docuemntal de la Universidad Autónoma del Estado de México y el Programa de Bibliotecología de la Universidad Autónoma de Chiapas (Martínez-Arellano, 2000).

Estas escuelas y programas de bibliotecología tiene sus propias características y currícula; sin embargo, todas ellas incluyen una área que comprende cursos relacionados con la organización de la información. (Tabla 1) Revisando los títulos de esos cursos, parecería que el aprendizaje del acceso temático no ha sido incluido. Por lo anterior y con el objetivo de conocer que cursos estaban relacionados con el acceso temático, una solicituda acerca de los objetivos y contenido de los cursos incluidos en el área de organización de la información fue enviada a las escuelas de bibliotecología. Cuatro de ellas contestaron a esta solicitud y los resultados son presentados a continuación:

Escuela Nacional de Biblioteconomía y Archivonomía

Indización I
Explicar el proceso de análisis documental, los fundamentos de los lenguajes y sus diferentes tipos.
Indización II
Analizar el concepto, el origen y las funciones de las listas de encabezamiento de materia y thesaurus, así como el control de la terminología.

Colegio de Bibliotecología (Universidad Nacional Autónoma de México)

Catalogación y clasificación II-2
Conocer la teoría de la representación del contenido de los documentos usando lenguajes controlados (encabezamientos de materia y tesaurus). Utilizar lenguajes controlados en la organización documental.

Escuela de Bbliotecología e Información (Universidad Autónoma de San Luis Potosí)

Indización y lenguajes de búsqueda informativa
Los estudiantes serán capaces de crear y desarrollar un índice además de aplicar los lenguajes de búsqueda y procedimientos disponibles para recuperar informacion de acuerdo con los sistemas establecidos. Las herramientas usadas en el almacenamiento y recuperación de la información de un documento, una base de datos o un banco de datos será parte del conocimiento del estudiante.

Licenciatura en Bibliotecología (Universidad Autónoma de Chapas)

Análisis y representación de la información II (Contenido Tématico)
Al término del semestre, los alumnos serán capaces de conocer y analizar intelectualmente el contenido temático del material bibliográfico y documental una vez que conozcan el uso, manejo y aplicación de la Lista de Encabezamientos de Materia de Gloria Escamilla.
Resúmenes
Inducir al alumno a que comprenda la naturaleza y diversidad de tipos de resumenes que son factibles de utilizar para la prestación de servicios de información.

Tesaurus

Inducir al alumno a que comprenda los fundamentos para la utilización de los tesauros como instrumentos para la clasificación de los contenidos temáticos de los documentos y de las posibilidades de servicios de información que pueden derivarse de este tipo de clasificación.

Consideraciones finales

La forma física del catálogo ha cambiado y ahora es una situacion común usar catálogos en línea y en web, pero no sólamente la forma física del catálogo ha cambiado. Los nuevos catálogos han incrementado sus puntos de acceso y han incorporado nuevas opciones de búsqueda, particularmente las búsquedas por tema. En adición a las búsquedas por encabezamientos de materia o términos controlados, en los catálogos en línea y en "web" es posible efectuar búsquedas por las palabras del titulo o las palabras incluidas en cualquier otro campo de los registros. Estas dos formas de búsqueda y recuperación de la información acerca de un tópico particular presenta ventajas y desventajas. El uso de palabras libres dentro del proceso de búsqueda nos llevan a una recuperación de una gran cantidad de información pero su precisión disminuye. Además de los recursos impresos, los autores y las organizaciones están utilizaando recursos electrónicos para diseminar conocimento e información y han surgido nuevas herramientas para organizar este tipo de recursos. Los portales y los motores de búsqueda están siendo utilizados para organizar y localizar recursos electrónicos, pero las características de recuperación temática de estas herramientas están basadas principalmete en los lenguajes libres. Este hecho provoca que en ocasiones un usuario obtenga gran cantidad de información pero mucha de ella sea irrelevante. Para resolver este problema ha sido recomendado el uso de lenguajes controlados y herramientas como los Encabezamiento de Materia de la Bblioteca del Congreso.

Aunque el uso de los lenguajes libres es una opción fácil y barata para indizar recursos electrónicos, las bibliotecas y otras unidades de informacion tendrán que utilizar lenguajes controlados para almacenar y recuperar la información precisa que satisfaga las necesidades de los usuarios. De esta forma, los lenguajes controlados continuarán jugando un importante papel en la organización de los recursos electrónicos y por lo tanto, su aprendizaje necesita ser reforzado. Las escuelas de bibliotecología tendrán que incrementar el número de cursos cuyo principal foco sea el análisis temático para el almacenamiento y recuperación de la información en catálogos y otras herramientas utilizadas en la organización de la información. Adicionalmente, la importancia y ventajas de los lenguajes controlados deberán tener un papel importante en estos cursos. Tradicionalmete, las escuelas mexicanas de bibliotecología han dado gran importancia a los cursos de organización de la información; sin embargo, la mayoría de los cursos relacionados con esta área son enfocados a la catalogación descriptiva de los materiales. Es necesario incluir en los programas de estudio de bibliotecología más cursos cuyo principal objetivo sea incrementar el aprendizaje acerca del contenido temático y los lenguajes utilizados para el correcto almacenamiento y recuperación de la información en catálogos y otras herramientas de búsqueda. Sólamente en esa forma, los bibliotecólogos estarán adecuadamente preparados para enfrentar los retos que la tecnología y los nuevos tipos de recursos de información han traido consigo.

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TABLA 1. CURSOS RELACIONADOS CON LA ORGANIZACION DE LA INFORMACION EN LAS ESCUELAS MEXICANAS DE BIBLIOTECOLOGIA

Escuela Nacional de Biblioteconomía y Archivonomía

Area de organización técnica

- Fundamentos de la organización técnica de materiales documentales
- Sistemas bibliotecológicos de clasificación
- Códigos de catalogación I
- Códigos de catalogación II
- Bibliografía
- Indización I
- Indización II
- Sistema de Clasificación Decimal de Dewey
- Sistema de Clasificación Library of Congress
- Organización de catálogos

Colegio de Bibliotecológica (Universidad Nacional Autónoma de México)

Area de servicios técnicos del libro

- Catalogación y clasificación I-1 y I-2
- Catalogación y clasificación II-1 y II-2
- Catalogación y clasificación III-1 y III-2
- Catalogación y clasificación IV-1 y IV-2
- Servicios técnicos del libro
- Selección de materiales
- Introducción al procesamiento de datos 1 y 2 (Optativa)
- Estadística aplicada a la educación 1 y 2 (Optativa)
- Conservación y restauración del libro 1 y 2 (Optativa)

Escuela de Bibliotecología e Información (Universidad Autónoma de San Luis Potosi)

Area de análisis y organización de la información

- Catalogación I, II, II, IV, V
- Clasificación I, II, III
- Taller de Conservación y restauración
- Indización y lenguajes de búsqueda informativa
- Redacción de documentos científicos
- Taller de procesamiento de información
- Bibliografía I, II
- Bibliografía mexicana

Colegio de Bibliotecología (Universidad Nacional Autónoima de Nuevo León)

Area de organización bibliográfica

- Clasificación y catalogación I, II, III, IV, V, VI
- Selección y adquisición de materiales documentales
- Publicaciones periódicas y seriadas
- Introducción al procesamiento de datos I, II

Licenciatura en Ciencias de la Información Documental (Universidad Autónoma del Estado de México)

Area de teoría de la información

- Historia de los soportes documentales
- Desarrollo de fondos y colecciones I
- Desarrollo de fondos y colecciones II
- Catalogación I
- Catalogación II
- Introducción a las ciencias de la información documental
- Unidades de información documental
- Sistemas de clasificación I
- Sistemas de clasificación II
- Sistemas de clasificación III
- Sistema político y administrativo de México
- Legislación documental
- Administración de documentos
- Descripción documental I
- Descripción documental II

Licenciatura en Bibliotecología (Universidad Autónoma de Chiapas)

Area de sistemas de clasificación documental

- Los sistemas de clasificación del conocimiento
- Los sistemas bibliotecológicos de clasificación
- Análisis y representación de información I (descripción)
- Análisis y representación de información II (contenido temático)
- Clasificación de acervos
- Clasificación de catálogos
- Resúmenes
- Tesauros

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Teaching of subject access and retrieval at Mexican LIS Schools

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Abstract:

Subject searching is one of the most important retrieval functions for obtaining useful information from catalogues. Subject searching in catalogues originally took the form of using a controlled language but OPACs have included new techniques like keyword searching. This fact means LIS students must learn about controlled and free-text languages' attributes to be successful in cataloguing and reference work. This paper shows how subject access has changed in online and Web-based catalogues; likewise how teaching of subject access and retrieval has been considered in LIS education, particularly in the curricula of Mexican LIS schools. Likewise, it proposes some actions to improve teaching of subject searching

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No longer are library holdings just books, but different kinds of information-bearing entities (visual images, audio recordings, and digital objects, among others) have emerged and have been incorporated into the library collection. Likewise, many organizations and individuals are using the Internet for generating and delivering electronic information. The amount of electronic resources that are available on the Web has been substantially increased in recent years and there is an urgent need to include them in the library collection and, consequently, to include their surrogates in the library catalogue. Additionally, the catalogue's physical form has changed from cards to online and

Web-based catalogues. In the past, the catalogue was only accessible in the library but now it is accessible in many places outside as well. Library users can retrieve information not only about holdings in the local library, but also can examine holdings from other libraries. Moreover, modern catalogues offer a variety of options in terms of their access points. Card catalogues have given way to online and Web-based catalogues that incorporate new search options, particularly subject searches.

Subject access in library catalogues

In card catalogues, the only options for retrieving information about the holdings of a library were by author, title and subject. In comparision, online and Web-based catalogues make searches by the title words or words included in any other field as surrogates possible. In this way, the possibilities of subject access in online and Web-based catalogues are not limited to subject headings, a controlled language, but they are extended to keywords, mainly those from the title, which is the basic constituent of free-text. The use of these alternatives for searching and retrieving information on a particular topic is not something totally new. Indexes and abstracts covering published literature in several disciplines have used controlled and free-text vocabularies for many years. Likewise, many arguments related to the advantages and disadvantages of these two options have appeared in the LIS literature over the years (Lancaster, 1991). Additionally, free-text or natural language searches have been incorporated into search engines and portals in order to perform subject retrieval. With regard to this new retrieval tool, Thomas (2000) comments: "With the Web estimated to be increasing by 10 million pages weekly, the task of indexing Internet resources is clearly gargantuan, and not something that can be accomplished by even the most industrious beehive of catalogers. Instead of relying on the catalog to identify and retrieve relevant Web pages, users have turned instead to Web portals"

Portals have certainly became very popular search and navigation tools and some libraries are developing them. In this context, Thomas (2000) mentions: "Recognizing that some patrons may prefer to connect directly with online resources without being routed through the catalog, some libraries have developed separate gateways to networked resources. These gateways facilitate access to electronic materials selected by the library by providing a single point of entry, by organizing them into categories, and using metadata, often derived from their catalog records, to assist users in locating networked resources"

Portals are being developed by libraries and they have widespread acceptance by library users; however, like search engines, their subject retrieval features are mainly supported by free or natural language which has advantages but also disadvantages. Free language richness and variability lead, ironically, to ambiguity. The use of an unlimited number of words in indexing and searching processes leads to useless effort and a certain degree of error in information retrieval (Cleveland and Cleveland, 1991). Moreover, the use of free-text increases the amount of material recovered but decreases the precision of the retrieved information (Lancaster, 1986, 1991).

Unlike free-text, a controlled vocabulary has more advantages. Gerhan (cited by Peters, 1991) found that catalogue users retrieved more records in fewer attempts making use of the Library of Congress Subject Headings. Additionally, when testing a catalogue that contained a considerable quantity of material in a language different from the one used for the actual indexing, Martínez-Arellano (1999) discovered that a great deal of material was missed. Referring to the importance of a controlled vocabulary, Tillet (2000) points out : "Authority control enables "precision and recall," which are lacking from today's Web searches. Authority control provides precision to retrieve only those records or items of interest, and the syndetic structure of authority control's cross references assures recall of all the relevant materials, as well as navigation to reach bibliographically related materials. It cannot be stressed enough that this feature of online catalogues adds tremendous value to the user's search and retrieval process. No more wading through tens of thousands of retrieved and computer ranked results for anything close to what we asked for, unless we want to. Let's give users the option for more precise searching, if they want it"

In a networked environment, libraries no longer own most electronic resources; they just have access to them. In this situation, the physical description of the electronic resources plays a secondary role to their content description. A correct description of those topics dealing with an information-bearing entity would allow information users to evaluate surrogates in order to decide which electronic resources are more convenient to access. Library of Congress Subject Headings has been recomended as an important tool that can be used in a networked environment to retrieve electronic resources by subject. Among the reasons for this recommendation, Chan (2000) mentions the following: "(1) LCSH is a rich vocabulary covering all subject areas, easily the largest general indexing vocabulary in the English language; (2) there is synonym and homograph control; (3) it contains rich links (cross references indicating relationships) among terms; (4) it is a pre-coordinate system that ensures precision in retrieval; (5) it facilitates browsing of multiple-concept or multi-faceted subjects; and, (6) having been translated or adapted as a model for developing subject headings systems by many countries around the world, LCSH is a de facto universal controlled vocabulary."

All the above arguments show the importance of controlled vocabularies for subject retrieval in a networked environment. "The reason is that effective cataloguing involves controlled vocabularies and adherence to the standards that have evolved in the past 100 years" (Gorman, 2000). Since controlled vocabularies are important subject retrieval tools, then, it is also important to look at how LIS schools are educating librarians for managing "traditional" cataloguing standards, particularly subject retrieval and controlled languages. Only if LIS students learn the basic principles can they manage electronic resources organization and retrieval adequately.

Information organizacion and subject access teaching

Subject access and retrieval have been integrated into most of the coursework at LIS schools. In a survey carried out among the Masters programs accredited by the American Library Association in the United States and Canada, Cortés-Arriaga found 450 courses dealing with the matter. The titles of those courses included information retrieval, online searching, search strategies, information storage and retrieval, online bibliographic services, organization of information, indexing, information organization, database access, online information retrieval. Many courses dealing with subject access and retrieval were in the service area. Courses related to technical processes or information organization were fewer. Also, there were few courses whose title and content were focused specifically on subject access. Such courses include: Subject analysis and thesaurus construction (The University of Western Ontario), Indexing and surrogation (State University of New York at Buffalo) Indexing (University of Wisconsin-Madison), Text Retrieval, Web Search Engines (Iowa University), Abstracting and Indexing, Thesaurus design and construction (Pratt Institute).

Although subject access has been integrated to some courses at LIS schools, its inclusion has been mainly in those courses dealing with the retrieval process. The importance given to the storage process has declined, cataloguing courses have decreased in the last years. A study by Spillane (cited by Weiss and Carstens, 2001) showed that in 1998 only 52.1% of library schools required a cataloguing course, compared to 77.1% in 1986. Nevertheless, giving LIS students the basics of cataloguing and subject access will prepare them to help users to find the information they are seeking. A study carried out by Banks (cited by Weiss and Carstens, 2001) showed how learning the rudiments of cataloguing assists users in locating materials in the catalogue. Regarding subject access teaching, Romero (1995) has recommended: "educators should ensure that students not only understand how to use the various subject headings tools, so that headings are valid, but should also emphasize how to analyze the subject content of the work so that appropriate and valid headings can be assigned."

Additionally, this author mentions: "when instructing students in subject cataloging and classification, educators need to stress the overall goal of subject analysis both in application and in access. Educators should ensure that in addition to knowledge of how to use the tools students should also acquire the ability needed to assess the subject content of an item so that retrieval does not become an exercise in second-guessing." All these arguments show the necessity to emphasize teaching the organization of information, particularly those aspects dealing subject content analysis of information-bearing entities to get accurate retrieval.

Information organization and subject access teaching at Mexican LIS schools

At the present time, there are six LIS schools at Mexico that prepare professionals in this discipline. These schools give education at the undergradatuate level and their main objective is to train professionals to select, acquire, catalogue, classify and deliver information to all kinds of users. The first Mexican LIS schools were founded approximately fifty years ago, the National School of Library and Archive Sciences in 1945, and the College of Library Science of the National Autonomous University of Mexico in 1956. Both were established in the country's capital. There are four other LIS schools in different Mexican universities: School of Library and Information Science of the Autonomous University of San Luis Potosi, College of Library Science of the Autonomous University of Nuevo Leon, Documental Information Science Program of the Autonomus University of Mexico State and Library Science Program of the Autonomous University of Chiapas (Martínez-Arellano, 2000)

These LIS schools and programmes have their own characteristics and curricula; however, all of them include an area that comprises courses dealing with organization of information (Table 1). Looking at the titles of those courses, it seems that subject access learning is not included. In order to know what courses were related to subject access, a questionnaire about the course objectives covering the organization of information was circulated. Four LIS schools answered this request and the results were as follows:

National School of Library and Archive Sciences

Indexing I To understand the process of documental analysis, foundations of languages and their different types
Indexing II To analyze the concept, origin and functions of subject headings lists and thesaurus , as well as the terminology control.

College of Library Science (National Autonomous University of Mexico)

Cataloguing and classification II-2

To know the content representation theory of documents using controlled vocabularies (subject headings and thesaurus). To use controlled vocabularies for documental organization.

School of Library and Information Science (Autonomous University of San Luis Potosi)

Indexing and languages for information searching.
Students will be able to create or develop an index, as well as apply the accessible search languages and procedures to retrieve information according to established systems. The tools used in information storage and retrieval of a document, a database, or a databank should be part of the student knowledge.

Library Science Program (Autonomous University of Chiapas)

Information analysis and representation I-II (subject content)
At the end of the course, students will be able to know and to analyze the subject content of bibliographic materials. Moreover, they will learn the use, management and application of subject headings lists.
Abstracts: To guide students to understand the nature and diversity of different types of abstracts that can be used in information services
Thesaurus: To guide students to understand the foundations of thesaurus and its use for the content description, as well as to learn the possibilities that these tools can offer information services

Final considerations

The catalogue's physical form has changed and now it is normal to use online and Web-based catalogues. But not only the catalogue's physical form has changed, new catalogues have increased access points and they have incorporated new search options, particularly subject searches. In addition to searches by subject headings or controlled terms, online and Web-based catalogues make searches by the title words or words included in any other field from their surrogates possible. These two ways of searching and retrieving information about a particular topic have advantages and disadvantages. The use of free-text in the searching process leads to the retrieval of a great amount of information but its precision decreases. In addition to printed resources, authors and organizations are using electronic resources for delivering knowledge and information, and new tools for organizing these types of resources have emerged. Portals, gateways and search engines are being used to organize and find electronic resources but the subject retrieval features of these tools are mainly supported by free-text. The result is that sometimes a user gets a great amount of information, but most of it is irrelevant. In order to solve this problem, the use of controlled languages and tools like the Library of Congrees Subject Headings has been suggested.

Although use of free-text is an easy and cheap option for indexing electronic resources, libraries and other information agencies will have to use controlled vocabularies for the storage and retrieval of the precise information that matches user needs. In this way, controlled languages will continue to play an important role in the organization of electronic and networked resources, so knowledge of them will need to be strengthened. LIS schools will have to increase the number of courses whose main focus is subject analysis for the storage and retrieval of information in catalogues and other organization of information tools. Likewise, in these courses, the importance and advantages of controlled languages must play an important role. Traditionally, Mexican LIS schools have given great importance to organization of information courses; however, most of the courses dealing with this area are centred to descriptive cataloging of materials. It is necessary to include in the LIS curricula more courses whose main objective is to increase knowledge of the subject content and languages used for the storage and retrieval of information in catalogues and other tools. In this way, librarians will be adequately prepared to face the challenges that technology and the new types of information resources impel.

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TABLE 1. COURSES DEALING WITH ORGANIZATION OF INFORMATION AT MEXICAN LIS SCHOOLS

National School of Library and Archive Sciences

- Area of technical organization
    - Foundations of technical organization for documental materials
    - Library classification systems
    - Cataloging codes I
    - Cataloging codes II
    - Bibliography
    - Indexing I
    - Indexing II
    - Dewey Classification System
    - Library of Congress Classification System
    - Catalogs organization

College of Library Science (National Autonomous University of Mexico)

- Area of technical services
    - Cataloging and classification I-1 and I-2
    - Cataloging and classification II-1 y II-2
    - Cataloging and classification III-1 y III-2
    - Cataloging and classification IV-1 y IV-2
    - Technical services
    - Resources selection
    - Introduction to data processing 1 and 2 (Elective)
    - Statistics applied to education 1 and 2 (Elective)
    - Book preservation and restoration 1 and 2 (Elective)

School of Library and Information Science (Autonomous University of San Luis Potosi)

- Information analysis and organization area
    - Cataloging I, II, II, IV, V
    - Classification I, II, III
    - Preservation and restoration workshop
    - Indexing and languages for information searching
    - Scientific papers writing
    - Information processing workshop
    - Bibliography I, II
    - Mexican bibliography

College of Library Science (Autonous University of Nuevo Leon)

- Bibliographic organization area
    - Classification and cataloging I, II, III, IV, V, VI
    - Document selection and acquisition
    - Serials and periodicals

Introduction to data processing I, II

Documental Information Science Program (Autonomous University of Mexico State)

Information theory

- Document carries history
- Resources and collections development I
- Resources and collections development I
- Cataloging I
- Cataloging II
- Introduction to documentary information science
- Documentary information units
- Classification systems I
- Classification systems II
- Classification systems III
- Political and administrative system of Mexico
- Document legislation
- Document administration
- Document description I
- Document description II

Library Science Program (Autonomus University of Chiapas)

Area of documentary classification systems

- Knowledge classification systems
- Library classification systems
- Information analysis and representation I (description)
- Information analysis and representation I II (subject content)
- Resources classification
- Catalogues classification
- Abstracts
- Thesaurus

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The imperatives of Challenges for Africa in the Knowledge Age: Status and Role of National Information Policy

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Abstract:

In principle, the emergence of National Information Policy (NIP) as a framework for developing information resources and Institutions was welcomed by most countries in Africa with such a messianic zeal. However most of these countries and particularly those in the Sub-Sahara region were unable to correspondingly match their zeal with concrete efforts aimed at enunciating and implementing the policy. This situation is not unconnected with some mitigating factors and certain development peculiarities of some of the countries, all of which are discussed in the paper. Against the backgrounds of the above factors and peculiarities, most countries in the sub-region suddenly found themselves at a cross-road with the emergence of information society which is typified by the increasing prevalence and convergence of Information and Communications Technologies (ICTs). Thus the need for these countries to reappraise the concept of NIP to embrace the NICI initiative are discussed in the wider context of national and regional development objectives. The challenges of knowledge age are also articulated in the light of the ways forward for development in Africa. The paper concludes that the alternative to African countries failure to address these challenges will be for them to remain attached to the apron string of donor agencies and countries in perpetuity.

INTRODUCTION

Information is a strategic resource and a pivot around which the growth and development of individuals, organisations and nations revolve. The importance of information in the last decade or thereabout appeared to have been further underscored with the increasing convergence of information and communication technologies (ICTs) as tools for information gathering, processing, storage and transfer irrespective of time and spatial barriers. Moreover, information is the most traded product in this era of globalisation. Thus any nation desirous to avail itself of the advantages of globalisation can not but develop its information resources.

Unfortunately, in Africa, most countries and particularly those in the sub-Saharan region, the general paucity of information for development can be linked to the tendency to unwittingly take the resource for granted by most of the countries in the region. This tendency has subsequently resulted in the under development of information systems and services in most countries. Consequently, some countries in the sub-region have been known to base their development plans on parameters other than concrete, accurate and reliable data (Stolper, 1966).

Thus for African countries to be part of the globalisation processes in this millennium, there is a compelling need for the countries to review their information related rules, regulations, and policies with a view to evolving plans and strategies for developing their information resources, systems, infrastructure, and services. Accordingly, the objective of this exercise is to review the status, role, and adequacy of national information policy (NIP) as a framework for developing information resources on the African continent vis a vis the demands and challenges of information society. This is achieved against the backdrop of the constraints to successful formulation and implementation of the policy on the continent. This approach provides the platform for analysing the inevitable challenges facing Africa in the information or knowledge age. To this extent, information is conceived as structured data while knowledge is internalised information. Thus knowledge age is that era in which information production and communication are primary preoccupation as contemporarily obtains worldwide. In such an era, national or regional capacity to produce and communicate information is a function of the existence of a corp of qualified professionals, enabling environment, and infrastructure for ICTs. The possession of information in such an era is synonymous with power. As a concept knowledge age is used interchangeably with information society in this presentation.

Conceptually, NIP is a framework for developing the information holdings of a country. As a framework, it is a statement of mission or intention on how the information resources are to be harnessed, processed, and channelled for development processes of a country. Thus, the primary objective of NIP is to put order into the chaotic webs of information. This is envisaged to facilitate accessibility for information users without necessarily infringing on the privacy and intellectual property right of the individuals and organisations. Above all information policy can be formal as well as informal. Formal information policy is usually articulated into document that the individuals can readily lay hand on. In the informal sense, information policy is not codified but implied. In this sense, elements of the policy are scattered across other sectoral policies. This latter aspect assumes that information activities in such an environment will naturally emerge and take their rightful positions in the economy. Examples of this type of arrangement are United States of America and Canada.

This paper is divided into five sections. Section one provides the introductory background and this is followed by an over view of African development experiences in section two. While the third section presents the status and role of NIP on the continent section four reviews the challenges Africa must address in the knowledge age. The last section presents the conclusion.

AFRICA AND THE DILEMA OF DEVELOPMENT

Next to Asia, Africa has approximately an area of 11,700 squared miles and this translates to about 20% of the total landmass of the earth (World Almanac, 1999: 862-863). With over 48 countries, the continent according to the World Bank (2000:7) has an estimated population of over 612 million people or 12.8% share of the World population. The same source on page eight estimated the population growth rate for the region at 2.9%. At this growth rate Africa per capita land area is put at 3.85 compared with 7.85 in 1970. This shrinking of the per capita land area of the continent portends a lot of implications for the ever-growing population with regard to an overall sustainable development and alleviation of poverty.

Though the countries on the continent are not necessarily homogenous in terms of ethnicity and culture they however share a common history of colonialism and struggles for independence. They share also a similarity of rich endowments with regard to diversified human and natural resources, which are yet to be exploited to their optima. With the exception of South Africa, Botswana and probably some of the countries North of the Sahara desert, the rest countries have been unable to bring their tremendous resources to bear on their development problems. While some countries have been incapacitated by avoidable internecine political-cum-ethnic wars, others were afflicted by acquired leadership syndrome, which is a tendency for leaders to see and treat public resources as personal resources that can be appropriated without due regard for the laws of the land. For such leaders illegal capital flights to other regions of the world have become routine affairs.

The consequences of the above tendency on the development of the countries are many of which the general underdevelopment of basic infrastructure as platforms upon which the development of the different sectors of the economies can be based stand out clearly. The relatively poor health and education services, industrial capacity under utilisation and the poor nature of information services exemplify the weaknesses of the sectors. Above all, most of the countries have to contend with negative balance of trade, the burdens of huge debts, dependent on aids for development purposes and inability to avail themselves of the numerous advantages presented by globalisation. In a sense, most African countries South of the Sahara appear to be at great risk of being sidelined in the area of development activities and in particular with regard to the raging world information revolution. This is not unconnected with the underdevelopment of their information systems and infrastructures.

STATUS AND ROLE OF NIP IN AFRICA

Increasing high level of awareness of the importance of development information as a strategic resource in decision making demanded that the resource should be properly managed. This demand gave rise to the emergence in the late 70s of the concept of national information policy (NIP) as a framework for developing and managing information resources, infrastructure and institutions. The acceptance of the concept received further boost according to Manten (1983) with the miniaturisation in electronics, which salutarily reduced the production and purchasing costs of computer and telecommunications as tools for information management. Furthermore, Rowland (1996) reported that the concept received a new perspective with the increasing convergence of information and communication technologies (ICTs) for information processing and transfer irrespective of time and spatial barriers. Against this background, the developed countries desirous to remain competitive in the global information industry evolved conscious plans and strategies that would help them consolidate the gains of the aforementioned developments.

Unlike in the developed countries, the concept of national information policy in Africa particularly in the sub-Saharan region became an issue not necessarily as a result of any conscious efforts on the part of most of the countries but as a result of persistent prompting from some multilateral agencies like UNESCO, UNDP, ECA and national agency like IDRC of Canada. Through consultations, workshops and seminars the agencies sensitised countries to the need to formulate and implement the policy at their individual national level. Libraries, documentation centres and archives which according to ECA (1999) historically constitute "the major storehouses and suppliers of information" served as the focus for such policy initiative.

As a concept, most countries in Africa accepted NIP with such a messianic zeal without correspondingly matching their zeal with concerted efforts aimed at enunciating and implementing the policy at their individual national levels. The non-existence of the policy at the national levels of most countries are usually explained in terms of low level of human and materials capacity to formulate and implement the policy on a sustainable basis. Accordingly, a number of plans and strategies aimed at facilitating the enunciation and implementation of the policy on the continent were evolved by IDRC (Akhtar and Melesse, 1994; Valentin, 1996) while UNESCO among other activities produced handbooks for formulating and implementing the policy (Montviloff, 1990; Horton, 1997).

Without necessarily disagreeing with aforementioned constraints it is observed that the non-formulation and implementation of the policy on the continent is fundamentally a product of certain development peculiarities of most countries in Africa. A situation where most of the countries are engaged in perennial political and ethnic crisis, which often result in avoidable wars can only serve to divert scarce development resources in favour of the prosecution of the wars. A look at countries like Botswana, South Africa, and Senegal all of which have elements of the policy on ground shows that they have relative stability which is crucial to policy implementation.

In a circumstance such as above, government's attitude towards the policy cannot but be that of rhetoric and less of concrete actions capable of uplifting the continent's information scene. Furthermore the issue of policy linkage is a major constraint to the actualization of the policy in the region. The implementation of national information policy cannot and must never be in isolation of other sectoral policies of a country. The tendency for government agencies and departments in some countries to see themselves as archipelagos of their own is certainly not conducive to development. It is in this regard that one may want to agree with the ECA (1999) report on NIP in Africa to the extent that the formulation and implementation of the policy on the continent "was marked by its lack of comprehensiveness in terms of contents and coverage."

The issue of leadership is another constraint to the enunciation of NIP in the region. Most countries in Africa appear plagued with leadership problem. The tendency for some leaders on the continent to see themselves as absolute leaders ordained by the gods to rule their countries in perpetuity despite apparent evidence of declining productivity does not augur well for meaningful development. The level of receptability to change by most of such leaders is at best very poor. Often time, such leaders feel they have answers to all the developmental problems of their countries. To them, expert advice or opinion from individuals, organisations, and agencies is no more than a routine to convince their populace that their government is "working".

With the probable exception of some few countries, the infrastructure for development information on the continent is to say the least very weak.. Sturges and Neil (1996) succinctly articulated this position when they reported that African libraries, information centres and data bases "are almost without exception the last places that serious researcher would visit in order to find information concerning Africa." The situation may differ from one country to the other. On the whole, the report depicts the general paucity of development information in the region due to non-development of infrastructure for information services. Perhaps if the countries had given adequate attention to the development of their information infrastructure and institutions within the NIP framework, the information scene of the continent could have been a lot better.

Against the backdrop of the non-formulation of the policy by most countries, Africa seems to find itself at a crossroad with the emergence of information society, which is dominated and characterised by the convergence of ICTs. Information society demands the existence of capacity to generate and transmit information through a network of functional systems and infrastructure. It also demands unhindered access to information services irrespective of time and location of such services using the powers of ICTs. These demands underscore the inadequacy of NIP as a framework for addressing the challenges of the new era where technologies hold the sway.

Thus there is a need for African countries to review the concept, philosophy, and goals of NIP to encompass ICTs related issues. In this regard, emphasis should be on ICTs role in development processes and the environment in which they are to be applied. Of equal importance is the issue of information content on Africa by Africans. The continent can no longer continue to depend on information about the region originating elsewhere.

AFRICA IN THE KNOWLEDGE AGE

The knowledge age is dominated by the powerful convergence of ICTs. The age is also characterised by ever increasing human capacity for information generation and consumption. The level of development in this age is of such a magnitude that interactive communication on the "information superhighway" between two or more people regardless of time and location is not just a possibility but a reality that has brought about the emergence of information society which Loader (1998:3) described as "a new social and economic paradigm restructuring the traditional dimensions of time and space within which we live, work and interact." To live and be an active member of the Information Society, imposes some inevitable challenges vis a vis the possession of the right expertise and ICTs infrastructure.

In contemporary Africa, communication facilities such as telephony in most countries with the exception of South Africa, Botswana, Mauritius and some North African countries are still at a rudimentary stage of development. According to UNECA's countries telephone availability profile which is hereby annexed, most countries in the region still trail behind ITU minimum recommendation of 10 lines to 1000 persons. It is a truism to say that the gap between information rich and poor nations is most pronounced in Africa. Accordingly, Aiyepeku (2000) observed that:

> *there are enormous gaps between the technologically advanced, industrialised societies of the world and the developing nations in the availability of communication services. Of all the gaps that exist between the South and the North, none is growing faster than the Information gap, and the emerging 'information superhighway' threatens to increase the growth rate to the point where some countries and some segments of society... may be left out altogether.*

This assertion imposes on Africa countries the need to make some concerted efforts at both national and regional levels to evolve plans and strategies for developing their ICTS infrastructure. It is from this perspective that both the ECA (1999) and the ECA (1999ii) African Development Forum (ADF) initiatives on National Information and communications Infrastructure (NICI) deserve some considerations by African countries. The initiatives rightly underscore the inadequacy of conventional NIP to address the demands and challenges of information or knowledge age. But then any plans and strategies for developing African information and communication problems ought to be within an enlarged framework consisting of both NIP and NICI initiatives. Above all, the policy must be dynamic enough to accommodate a number issues and most especially the issue of appropriate ICTs and human development for Africa. The former has to do with hardware performance reliability which according to Morales – Gomez and Melesse (1998:12) also includes assessment of "the social, economic, and cultural dimensions of the technologies and their impacts on sustainable human development". The latter relates to the need to build a corp of information and communications professionals with capacity to combine information consumption and production most effectively. The production aspect is central to the need to put Africa on the global map of 'information superhighway' with Africans making substantial information input to the existing information about the continent.

It is however emphasised that sectoral development policies in some African countries are derived from sources other than from the overall development plans of the countries. This has the implication of making programmes and projects derived from such policies to look "alien" to the overall development focus of the countries. Accordingly, any framework for developing the information and communication scene of African countries must derive its philosophical root from the overall development plans of the countries. This principle will allow for inter-sectoral linkages which have been the bane of sustainable development on the continent.

It must however be pointed out that the ECA (1999:2) initiative advocated, "leapfrog strategies to accelerate the development of the continent". Appropriate as this proposal may seem, one is of the view that leapfrogging cannot solve African development problems in the areas of ICTs more so there is no short cut to development. In an era of rapid innovation and change in the development of ICT hardware and software arising from huge investment in R & D in the developed countries, leapfrogging as a development concept can only serve to compound African ICTs problems with regard to technical expertise and management capability. For instance, a situation whereby a country cannot fully grapple with the management of a piece of technology before another model of that technology emerges on the market makes leapfrogging a less acceptable proposition. Rather any policy arrangement to develop the information infrastructure on the continent in the context of NICI should focus on the empowerment of the individuals in respect of capacity building and the development focus of the countries taking into consideration the peculiarities and needs of individual countries. Every country is to decide its pace of development based on its available resources and capacity.

CONCLUSION

The knowledge age presents the African nations a new vista of opportunities for growth and development. These opportunities can however be fully harnessed in so far certain challenges are addressed. These challenges are the development of the human resource capacity of the countries so as to be able to effectively utilise ICTs with regard to information management. More importantly, Africans must convincingly face up to the challenge of putting Africa on information superhighway by way of information production. The continent must be seen to be contributing its quota to the world information heritage. The poor technological infrastructure of the continent and the appropriateness of the technologies are additional challenges that also deserve to be addressed with utmost attention and urgency. This is crucial if the countries in the continent are to harness the numerous opportunities of the information era. Specifically the performance reliability, socio-cultural cum economic dimensions of the technologies constitute major parameters for assessment. These challenges are surmountable but not without reviewing the philosophy, scope and focus of the conventional NIP to encompass some of the ideals of the NICI initiative. But then successful enunciation and implementation of the policy is a function of the existence of stability and security at the national level of every country. Above all, leaders at every level of governance must be imbued with a manifest political will power to make the policy work. By so doing Africa will naturally become a member of the information society. The alternatives to not addressing these challenges by African countries will be for them to remain attached to the apron strings of aid donor countries and multilateral agencies.

ANNEXTURE

Telephone and Cellular Network in Africa – 1997

Countries *	Population for 1997 in ‘000	Main Telephone Lines	Main lines per 100 inhabitants	Cellular subscribers	Cellular subscribers per 100 inhabitants
North Africa					
Algeria	29,473	1,400,343	4.75	15,000	0.05
Egypt	62,010	3,452,707	5.57	7,224	0.01
Libya	5,784	380,000	6.56	0	0
Mauritania	2,392	13,145	0.55	0	0
Morocco	27,518	1,378,000	5.01	74,422	0.27
Sudan	27,898	150,973	0.54	3,800	0.01
Tunisia	9,325	585,238	6.27	5,539	0.06
Total			4.47		0.06
West Africa					
Benin	5,720	36,453	0.64	4,295	0.08
Burkina Faso	11,087	36,528	0.33	1,503	0.01
Cape Verde	406	33,241	8.19	20	0.004
Cote d'Ivoire	15,250	129,808	0.85	32,400	0.21
Gambia	1,141	21,319	1.87	3,096	0.27
Ghana	18,338	77,886	0.42	12,766	0,07
Guinea	7,614	19,786	0.26	2,868	0.04
Guinea-Bissau	1,112	7,633	0.69	0	0
Liberia	2,880	4,500	0.16	0	0
Mali	11,480	23,488	0.20	2,842	0.02
Niger	9,787	16,404	0.17	98	0.001
Nigeria	118,369	405,073	0.34	13,000	0.01
Senegal	8,762	115,902	1.32	6,942	0.08
Sierra Leone	4,428	17,382	0.39	0	0
Togo	4,316	25,132	0.58	2,995	0.07
Total			0.44		0.4
Central Africa					
Cameroon	13,937	70,558	0.51	2,200	0.02

Centrafrican Rep.	3,416	9,704	0.28	471	0.01
Chad	6,702	6,004	0.09	0	0
Congo	2,745	22,000	0.80	1,000	0.04
Equat. Guinea	420	3,668	0.87	61	0.01
Gabon	1,138	37,253	3.27	9,500	0.83
Sao Tome & Principe	100	2,503	2.50	0	0
Total			0.53		0.05

Countries	**Population for 1997 in '000**	**Main Telephone Lines**	**Main lines per 100 inhabitants**	**Cellular subscribers**	**Cellular subscribers per 100 inhabitants**
			East Africa		
Burundi	6,190	15,181	0.25	525	0.01
Comoros	652	5,508	0.84	0	0
Congo Dem. Rep.	48,040	36,000	0.07	8,900	0.02
Djibouti	634	8,151	1.29	110	0.02
Eritrea	3,780	18,919	0.50	0	0
Ethiopia	60,148	156,536	0.26	0	0
Kenya	33,140	269,773	0.81	5,345	0.02
Madagascar	15,845	43,197	0.27	4,000	0.03
Rwanda	5,883	15,000	0.26	0	0
Seychelles	76	14,864	19.56	1,149	1.51
Somalia	10,217	15,000	0.15	0	0
Tanzania	31,506	92,760	0.29	20,200	0.06
Uganda	20,791	51,829	0.25	5,000	0.02
Total			0.31		0.02
			Southern Africa		
Angola	11,570	55,843	0.48	7,052	0.06
Botswana	1,496	72,189	4.83	0	0
Lesotho	2,078	15,975	0.77	1,262	0.06
Malawi	10,440	35,471	0.34	3,700	0.04
Mauritius	1,141	222,747	19.52	37,000	3.24
Mozambique	18,265	66,123	0.36	2,500	0.01
Namibia	1,613	100,848	6.25	12,500	0.77
South Africa	42,096	4,258,639	10.12	953,000	2.26

Swaziland	938	22,602	2.41	0	0
Zambia	8,275	77,935	0.94	2,721	0.03
Zimbabwe	12,290	212,000	1.72	11,300	0.09
Total			4.66		0.94

* SOURCE:: UNECA Committee on Development Information (CODI)

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Skills and competencies for digital information management in Africa

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Abstract:

Every service oriented in the world today sees the need for survival and success pegged on the importance of identifying, developing and retaining managerial / leadership talent from amongst professional and individuals who demonstrate the ability to marshal global digital information for comparative advantage. Faced with global computerization and fast changing information technologies, Africa is at crossroads of information management and its provision. The information managers constitute the generation of senior executives who require skills and knowledge that will enable them cope with changes in the information service industry today. This requirement point to the kind of information managers that will break the barriers of information management, access and ownership just to ensure at least Africa and her citizenry have a share of the world information commodity at their disposal for development. Given the global computerization environment, this paper aspires for the kind of information manager that is versatile globally, deal with all sorts of technical and resource management issues and relate at all levels of interactions. The emphasis is on the information professional and manager with a vision of good leadership and excellent communication, presentation, interpersonal skills to steer Africa into the present and future era of computerization through guidance, advice and mentoring. The article advocates for information managers that are the champion of change in their respective organizations and leave them self- perpetuating into the future of digital information. These are professionals that have the visual knowledge and understanding of the challenges Africa is faced with in striving to embrace the concept of digital information. Noted is the fact that the present African magnitude of the economic social and political crises leaves it lagging behind in the information and communication age. Thus creating the elusion that the concept of the global information village is a hoax given that communication within villages is unattainable whether by road or telecommunication. Described in the same light is the fact that Africa contents with lack of basic skills, supervisory and management capabilities whose training is seen as wanting, irrelevant and obsolete. Attention is being paid to up grading skill in the organizations' labor force in both technical and behavioral skills thus calling for human resource development to meet the challenges of digital information reducing the complexities of training to performance improvement.

INTRODUCTION

Every service oriented industry in the world today sees the need for survival and success pegged on the importance of identifying, developing and retaining managerial/leadership talent from amongst professional individuals who demonstrate the ability to marshal digital information for its comparative advantage. Faced with global computerization and emerging fast changing information technologies, Africa is at the crossroads of information management and provision. Such information managers including librarians, should constitute the generation of senior executives requiring skills and knowledge that will enable them cope with changes in the information industry today. The kind of information manager that will break the barriers of information access and ownership and ensure at least Africa and its citizenry has share of the world digital information commodity at their disposal for development. Given the global computerization, this article aspires for the kind of information manager that is globally versatile, able to deal with all sorts issues in information world and relate at all levels of interaction. The emphasis is placed on a good manager with a viable vision of good leadership to develops excellent communication, presentation and interpersonal skills to steer Africa into the present and future era of computerization by being able to guide and advise governments, institutions and individuals on the way forward and indeed serve as mentors. The new paradigm for the African information manager is that of becoming a champion of change in their organizations today and leave self-perpetuating institutions for tomorrow's digital information.

CRITICAL POLICY ISSUES.

It is important to isolate the African critical policy issues which proper management skills and competencies have to address. Africa is at crossroad with recessions, organizational reconstruction and the problem of applying modern technologies to traditional organizational structures and vice verse. Africa is also to content with high unemployment, illiteracy and the ardent need for basic skills, lack of supervisory and management capabilities, and training being described as wanting, irrelevant and obsolete. A mismatch between the labor market needs and what knowledge and skills people have is evident. Thus exposing the majority of people without soft competencies in communications and basic computer literacy. What is being pronounced is the challenges of a continent and nations in transition and exposing an underdevelopment world without funds for training and improvement and no capacity to maintain new technologies crucial for global competitiveness. Today, Africa is concerned with handling rapid globalization against the background of poverty, illiteracy and diseases. The technology explosion is seen to promote the required changes and is well seen to make it really difficulty as it changes very fast indeed. However, it is admissible that the whole world is experiencing technological explosion thus making the transition from training to performance improvement really complex globally. But the catch is for everyone to pay closer attention to modernizing organizations' labor force in both technical and behavioral skills. This simply calls for African human resource development to meet global digital information and for the training institutions to develop a relevant program that targets the challenges of digital information.

Shibanda (2000) observes that Africa is economically stagnant and technologically marginalised. The obvious choice for people is to strive to meet their basic needs of life. This situation leaves Africa without investment alternatives to promote political and social economic growth. Thus sees information and telecommunication technology as an impetus for growth at all levels of development. If Africa fails to embrace this wave of worldwide digital information technology, then, they may as well sink by it. He therefore cautions that the existing fear and resistance on the right to communicate, access to information and exchange of experiences and ideas via internet connectivity need not be tolerated.

CRITICAL PATH.

While conceptualizing global information technologies, Shibanda (2000) described digital information in the same light with information society - information super highway - cyberspace - information age - virtual world - computer age - network computer systems - information revolution - internet age - global information village. He explains that the common understanding of all this is what the world witnesses currently as the era of worldwide telecommunication characterized by the global data highways harnessed vide use of appropriate information and communication technologies (ICT). He sees it as an euphoria of faster information communication and transfer through a menu of internet and e-mail facilitated communication What is brought in the fold is the present African magnitude of the economic social and political crises which leaves the continent at crossroads and lagging far behind in the information and communication age as shibanda points out that for many Africans, the concept of the global information village can be seen as a hoax given that communication within and across villages is unattainable whether by roads or telecommunication. It may therefore take as much as to eradicate poverty and ignorance as to telenetwork the villages and urban centers. This is tall order for steering ICT in Africa. Yet Africa must still embrace the concept of digital information whose task and token the information managers within the continent have to direction through a platform of action that empowers the African information manager to have a visual knowledge and understanding of the African problem as seen through:

- Reduced access to knowledge and information
- Need for regional-global integration and co-operation
- Need for ICT cultural ethics
- manpower resource requirement
- Education, research and an ICT development structure programs
- Funding for ICT investment
- Poverty and illiteracy in African society.
- Legislation gaps and ICT policy guidelines
- Insecurity and bureaucracy against ICT

These are the issues the information professionals have to content with in Africa. Indeed their energies must always be directed on the above problems for attention. The bottom-line is that it will require their professional skills and competencies to help surmount these problems. They will have to marshal special approach and tactic to overcome these issues.

SKILLS.

The real challenge for African digital information is to put in place an information management or professionalism that possesses the skill and competencies that can develop meaningful programs that supports and activate that use of information and communication technology Willet (1988). Such programs should have global blending to land credentials to international information programs just to guarantee a partnership role for Africa in the information age. Such skills and competencies should evolve around providing which direction Africa takes to be part and parcel of digital information based on Shibanda and Musisi-Edebe (2000) description in the light of:

- Information society initiative
- Sectoral national-regional information infrastructure that will facilitate the development of an information and communication system targeting the connection of libraries, information centers and institutions through internet connectivity.
- Promote the use of on-line communication by putting in place a functional system as above.
- Development of national information strategy with backup decisions for participation as partners in the global information superhighways.

- Establish research, training and development programs for assessment of feasible ICT trends and course of action to enable the continent exploits cyberspace technology opportunities.
- Formulate possible programs of action through a national and regional ICT funding, policy and resource committees, information task forces, network program, ICT promotion groups and government ICT committees.

Embracing digital information wholesomely means adapting global information and therefore participating in worldwide information business. This ushers in a global culture that is equally important to all nations in the world - that of doing and handling things in respect to information with new approach virtually brought about by ICT. For the information professionals, there is need to reexamine skill application to suit both positive and negative aspects. These are:

(i) Positive Aspects

- Decentralization of leadership and decision making
- Transparency and openness in organization development
- Willing to change based on how it is elsewhere
- A more participative style and new vision in management of organizations with corporate value for corporative advantage brought about by digital information approaches.

(ii) Negative Aspects

- Digital information is forcing in centralized control of knowledge, strategies and values.
- Digital information vide globalization is ushering in new culture of doing business or undertaking tasks
- Digital information is causing misunderstandings and miscommunications in certain aspects.

The information professional should have the ability to build on the positive aspects of the information era while making good of the negative aspects of globalization to ensure the benefits accrued from digital information outweighs everything else. In other words, management skills should constitute a kind of response that is appropriate to meet the challenges of change as presented by information revolution globally. Appropriate training program need be put in place to provide the required skills to information managers in African organizations. This will ensure ICT takes root and little shocks are experienced while brokering and embracing digital information. This will also ensure information managers do understand the global nature and dynamics of digital information for the African advantage. Their activities would also include a more cultural digital information assessment, integration of global partners in digitized information, global decision making with pertinent leadership structures conducive in ICT environment for knowledge management and access.

Given digital information predicament world wide, management skills among information professionals will entail:

- Knowledge management, promotion and performance enhancement
- Fund raising and strategic organizational planner
- System designer/not necessarily system analysis
- Program development and policy and formulation
- Professional emphatic to research training and program development.
- Building of professional competencies, cultural sensitivity, courage to challenge
- Transparent, willingness and open to learning
- Possess dynamics of service / business with global nature
- Encourage global oriented structures and integration of global partners
- Promoter of human capital across cultures, be open minded, appreciate cultural diversity
- Persuasive in promoting change
- Create opportunities to educate management and clients in the new global digital information skills
- Cooperative and assist others to appreciate values such as respect, openness, trust, diversity, flexibility, teamwork, participative management style and possess holistic vision for digital information tasks.

Indeed one of the key issues in digital information management in Africa is to have organizations and people gain more confidence, competency and control in a world of versatility and fast changing ICT as a means to managing and accessing knowledge. It is common knowledge that digital information is a global phenomenon which presents a few challenges to African organizations. The African information managers need therefore to strive to fulfill new knowledge needs described by Hartenstein (1999) among others as:

- Theory and practice of globalization
- Cross cultural human communication
- Value awareness
- History and culture of each country in partnership
- Ways of handling change
- Communication skills

Much should be viewed from Hartenstein (1999) observation that digital information relative to globalization is the major drive for rapid change ... people management and development is the only source of a renewable competitive edge and possess a question on how can people management and development respond for globalization pressure ... in whose answer human management skill and competencies needs is built up in the:

- Use of computer technology training
- Knowledge management capability and learning culture
- Organization development skills

This particular package would help to actualize management endowed with organizational focus from process to outcomes, from control to capabilities and from management to enablement.

COMPETENCIES.

Twinning management skills and competencies should underlie sound base for sustaining Africa in digital information era. Competencies, in this context, places emphasis on bridging gaps in the technical structures and mapping of digital information. More so, in the technology know-how and its application for maximizing digital information globally. This article argues therefore that technical competencies particularly based within this understanding, is a must to overshadow the traditional management of knowledge and information in Africa and thus ensure the continent remain overboard globally. This will therefore require a management mind with a conceptual framework for implementing the technology required for transacting in electronic information service. There is therefore need to induct the African information manager in the art of Davenport (1997):

- Management of IT and web-technologies which should constitute management of change, management of quality, management of technology organization and management of investment.
- Knowledge information management with current capabilities option for intelligent information retrieval which constitute varying facilities to manage, store and retrieve documents. This is simply building on the information ecology vide information and knowledge environment.
- Project planning and management of virtual world which builds on the knowledge and understanding of communication mediums that will enhance project planning and scheduling in Africa. The knowledge skill and awareness of good project planning is an impetus for the continent's project management.
- Creation of community-based information networks based on multimedia digital networking information technology which constitute a community of organizations formed through co-operations via ICT networks for sharing resources. Community based competencies would evolve around various resources in the community that make up information, knowledge and expertise and therefore having the ability to think and act strategically within the community crucial competencies of information, knowledge and expertise. In practice this is what Kodama (1998) would call community management, purely seen as strategic community creation.
- Assessing opportunities and risks in ICT for African organizations
- Re-engineering African information management practices inline with global technologies and provide current and future directions of ICT technologies particularly multimedia technology.

MIND-SETTING THE INFORMATION MANAGERS.

A change of mentality or change of heart is currently required among library managers to be able to understand that they are in a kind of partnership in digital information management and provision. That telecommunication has reduced the world to a village and they are therefore part and parcel of the global village. The library manager in Africa has had traditional mind set on books (print word) as the vehicles of knowledge and information. Today, the very library manager is stigmised by the emerging digital information and is bound to compromise the idea of managing both information in print and managing digital information. He/she is now faced with the task of popularizing digital information against the background of illiteracy, lack of electricity, lack of telephone connectivity and poverty-stricken citizen without purchasing power for television and computers besides hostile political environment on freedom of information. Though faced with the dilemma of managing the traditional knowledge and information centers along side digitized resources, the library manager must blend and develop the taste of both. The librarian manager will need to adopt two approaches in order to help bridge the gap caused by digital information as reflected through:

(a) INFORMATION DIGITIZATION

In striving to put Africa at the heart of ICT development merely for harnessing and exploiting it, the library management in African organizations will need to re-engineer libraries as the realm of communication backbone of the information society through the provision of a wide range of products and services. To fulfil this task, the professional librarian should have the understanding and knowledge of:

- Promoting and publicizing ICT utilization by impacting information and computer skills and put In place facilities for information transfer including Internet cafes and e-mail connectivity close to people and through community centers.
- ICT programs that should form part of library and information education for equipping library management trainees with appropriate skills to manage and utilize digital information in African organizations.
- Research and mobilization of ICT working groups to plan and maximize global ICT opportunities.
- Information integration and resource sharing through co-operations by maximizing the ICT global opportunities just to ensure Africa has a share of digital information with appropriate ICT to allow access within and without.
- Re-engineering services that are cost-effective to allow exploitation of digital information via net-workings and on-line access while laying stress on information content, flow and value.
- Information management to help improve international program including Universal Availability of Publications (UAP) for collating African national bibliographies for ease of interlibrary lending activities.
- Legal framework of information to facilitate lobbying within institution, government for enhancing freedom of information by removing barriers on matters pertaining to ICT and putting in place a financial strategy for support and sustainability of ICT in Africa.

(b) PROPAGATION OF DIGITAL INFORMATION ETHICS

What matter is to have a functional ICT infrastructure for Africa to allow wider utilization of digital information. The distribution pattern of ICT facilitation that enables easy access and communication of information is limiting among regions and organizations. In extreme situations what already exists in terms of ICT hardware and software make it impossible for connectivity due to differing standards. This calls for a sound ICT ethics that should make Africa part and parcel of global information. Global ICT ethics should therefore have the understanding of the information professions steering Africa into the knowledge cyberspace. Such understanding and knowledge need include:

- Balanced decision making between the north and south to bear upon the information "have" and "have not" and work towards reducing information gap among people.
- ICT standardization for ease of connectivity.
- Acceptance of differing cultural values across the world and incorporate local knowledge.
- Help to build global networking and strengthen global partnerships via casual friendship and acquaintances.
- A visionary better world built on solidarity, social justice and ecological sustainability.
- Approve freedom of information as underlined through national legislation and international charters and international institutional programs devoid of censorship and propaganda.

(c) BRIDGING INFORMATION AND COMMUNICATION GAP

It is the strongest view of this author that haphazard information centers and systems including libraries are not conducive for adoption and application of information and communication technologies for their maximum exploitation. Information systems in Africa are perfect examples in dire need of reorganization for any meaningful ICT application. Notable examples are inadequate information resources despite high demands for such and costly information accessibility both for local and foreign literature not being readily accessed by the clientele. It is not even easy to communicate across villages given the underlying problems of telecommunication, road network and electricity supply. To think and move global, the information managers have to contemplate solutions to these problems. Yet there is overwhelming demand to have in-house library practices streamlined to allow for computerization. This is supported by the fact that the gathering, storage and retrieval of information is quite often seen to be an end in itself. Information is compartmentalized to the extend that it does not conveniently reach those who need it most, thus lacking integration for effective accessibility by those requiring it. The information professionals within the African environment require induction, knowledge and an appreciation of the challenges facing the information systems and libraries before leaping straight into the information technological environment. They must have the mind and initiative to diagnose what possibly hinders their organization from participating and reaping the global ICT opportunities and make moves to put the right technologies in place in order to exploit digital information Obviously ICT success stories from across the world would be a basis for African information managers and librarians to learn from.

(d) MANAGING ACCESS VS HOLDINGS

Most of library and information service oriented organizations in Africa are characterized by closed access to their informational holdings. Closed within the organization by definitions and classification of the holdings as specialized or research or Africana or cultural or national or merely educational/academic/college/university or even government materials, such collection patent to serve specialized clientele-researchers, academicians, planners/administrators etc. There are internal problems inherent with integration of such holding and accessing the same from the reader/user point of view. The same materials are unknown beyond their parent organizations making it hard to borrow on library interlibrary loans system. There is therefore curtailed use or exploitation of such holdings. An allied problem is the out of date of the material held by libraries in Africa. A respected management approach to overcome these problems would be:

(a) To allow and increase their accessibility
(b) To digitize the holdings via Internet websites
(c) Storing them in multimedia packages for multiple approach and usage.

The conducive motive of this role Agarwal, Tanniru and Wilemon (1997) is to move and communicate information to people with ease and faster as they need it. Interlibrary resource sharing in Africa has been a fallacy. The answer may therefore lie in digitized information communication and access.

SIGNS OF SUCCESS

One key measure of success will be determined from client acceptability and routine exploitation of electronic information against the background of frustrations of accessing and sharing information. The actual real measure of success will be the performance of the African libraries and institutions in the digital information market. The test is squarely on the art of keeping clients satisfied all the time and most of the time.

RECOMMENDATION.

This paper strongly agrees for Africa to embrace digital information to survive the global cyberspace. However, there is a need for the information managers to usurp required skills and competencies to ensure organizations and people reap the maximum benefits that have evolved from digitized information. As a utility measure, information professionals have to show their skills and competencies in:

- Delivering information to people efficiently and effectively
- Knowledge management and redesigning of information systems
- Information managers should acquire and apply concepts relative to management of information organizations. This should keenly reflect issues in planning, organizing, staffing, leading and controlling the information organizations within the context of global information era.
- Knowledge of organization assessment and change is crucial in mapping direction of print oriented information systems into the digital information. This calls for strategies of assessment, planning, development and change at the organizational and programmatic levels pertaining to African information organizations.
- Measurement and evaluation of library/information services will be brought into focus. The knowledge and understanding of strategies for implementing digitized information based services by the information professionals is imperative.
- A fresh look at the programs within the library and information education institutions has to bedone to equip information professionals with skills relative to closing gaps between conventional print and digital information. More so to provide overall understanding of the impact of modern revolution in information technology, challenges of the contemporary problems in information policies at individual, organizational, national and international levels. Fathoming contemporary legal and regulatory issues in view of the optimization of digital information and related information technology should underlie the legal know-how of the African information professionals for meeting (the challenges) of digital information world wide.
- There is great need to re-examine the key role of African human resource development which apparently requires a frame of mind and attitude that is open, curious and always ready to tackle new requirements brought about by digital information. This wholesomely implies that developing people to be capable of confidently and self-assuredly adapting to new challenges and changing circumstances and harnessing the resources abound with digital information. Professionals in this context need new intellectual, technical and cultural and interpersonal competencies. This is as a result of a growth of a worldwide digital information culture that is not specifically based on a particular national or ethnic pattern.

CONCLUSION

It is imperative that information managers understand the global nature and dynamics of digital information for the African advantage. The information managers must have the ability to build on the positive aspect of the global information era while making good of the negative aspect of globalization to ensure benefits accrued from digital information outweighs everything else. Management skills and competencies should constitute a kind of response that is appropriate to meet the challenges of change as presented by digital information vs global information revolution. To bridge the gap brought about by digital information, human resource development must be considered a crucial factor. Thus appropriate training and educational program should be put in place emphasizing skills and competencies for information managers as needed for brokering and embracing digital information. Indeed information professionals should view digital information as an opportunity for forging partnerships among nations but not as a threat to their survival. Bringing the whole Library of Congress or

British Library at the finger tips of a user via a remote terminal or personal computer situated in an African village, is such an overwhelming opportunity of a dream come true.

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Licence fees: barrier or opportunity for access to electronic content?

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Poles apart?

Licensing fees are always an emotive topic. On the one hand they conjure up images of extortionate sums being demanded by owners from people unable, let alone unwilling, to pay. They are demonised as denying people access to information and creating deliberate obstacles to the free flow of information. On the other hand, they are viewed by many people as simply an alternative mechanism for recouping their financial investment in the preparation and marketing of an expensive and valuable product, the very creation of which is seen as a risk as its viability and financial worth are far from certain or predictable.

Somewhere between these to polarised views we should find the real situation and be able to work with that for the benefit of everyone. This is a general truism and not applicable only to those with visual impairments of one kind or another who need to use copyright material.

The idea of a licence

First of all it is necessary to understand just what is meant by a licence as a general concept. Different legislations will define licences differently but the underlying idea is that the owner of something agrees with another person terms under which that person may use the thing in specified ways for a specified length of time in return for a specified compensation which is usually, but not exclusively, money but may also be simply that the thing is used only in specific ways or in particular circumstances. Whereas, when something is *sold* the owner relinquishes all control over the object, when it is *licensed,* then the owner retains an element of control. It may seem trivial to go back to such basics but, unless we do, we run the danger of getting all emotional rather than seeking rational arguments for and against any given situation.

The thing licensed may be a purely physical object or it can be intellectual property. Sports shops hire out bicycles, garden centres hire out equipment for digging, and manufacturers of many products hire out their trade marks to enable products to be made according to strict guidelines in countries other than their own. *Guinness* is a good example of this in more ways than one. In all these examples the owner retains some control and ultimate ownership.

Viewed from this angle, licences in the library and information world go back a very long way. The first public library established in the UK in 1850 lent out its books. In this respect the users of the library were licensed to use them but the public library retained ownership and control. They should not be mistreated, must be returned within a specified time and so on. Failure to observe these rules meant trouble for the user as the library still retained ultimate ownership of the book. Lending of this type is commonplace world-wide and a very common form of licence about which few people think twice. In a more specialised area, many music publishers deliberately avoid publishing orchestral sets of scores. For all kinds of reasons, some admirable, others not, these publishers prefer to hire out the sets for performances but never make them available for sale. Therefore they retain, once again, control over the works concerned.

Licences - friends or foes?

The rather superficial answer to this question is that it depends on whether you are the licensor (the person offering the licence) or licensee (the person taking out the licence)! But this is to see licences in the way described at the beginning of this paper. In fact, because they represent an agreement between owner and user they ought to be seen in a much more positive light as they should signify some kind of working relationship between the two. So why are they seen as so often contentious rather than harmonious? Some of the answers to this question can probably be found in mutual misunderstandings and mismatch of expectations. So it may be worth exploring some of these to see where the truth really lies.

Is the electronic world different?

Licences have existed for a long time in the traditional paper world so is the electronic world any different? From a legal point of view the answer is "probably not". From a practical standpoint it is a totally different environment. I think we all know the differences but it may be worth rehearsing some of them for the sake of clarity.

- Firstly, the question of copying. Copying in a purely physical world usually results in an inferior product being produced which rapidly degrades as further copies are made from it. Copying always costs in terms of time, effort and consumables. This results in a built-in and self limiting copying possibility. In an electronic world such copies can be made endlessly without loss of quality and at very little actual cost.
- Secondly, transmission and publishing. In the physical world there are real costs in transferring a copy from A to B in terms of actual transportation, time and packaging. In an electronic world copies can be sent instantly to anywhere in the world for the cost of a telephone connection and with no use of packaging or other materials. Unlimited retransmission is also equally possible. However, it should be noted, as with many areas of electronic transmission, that the costs of producing a permanent copy for the user is transferred from the publisher or owner to the user. We all now use large quantities of paper and ink, besides materials for other forms of output, simply to achieve what we used to buy direct from the publisher!
- Thirdly, Prevention. Stopping illegal copying is hard in the physical world. Nobody can stand over every photocopy machine, microfilm camera or painter's canvas to make sure only original works are being created or all copying is within the limits of the law. Neither is it really technically possible to stop copying by using various chemical or other techniques to build in anti-copying devices into the works themselves. The only way to make such actions legitimate is the "blanket" licence or recording of individual copying actions for which billing will subsequently take place. Blanket licences are blunt instruments that rarely reward accurately all those whose works are copied and individual recording systems are open to abuse, avoidance and neglect.

On the other hand, in the electronic world, it is quite possible to prevent copying and transmission and also to devise mechanisms of payment for such actions so that they are individually monitored and accurate payments can be collected and paid to the owners. Whilst circumvention is not impossible, it is quite difficult and the effort required may not be worth the copying fees avoided. This is equally true for copyright owners - elaborate systems for protection may be very efficient but so expensive they cancel out the economic benefit of preventing the copying. In other words, the value of copying must be greater than the cost of protection. Detailed models for electronic copyright management have been devised[1] but there is so far no example of all the requirements being implemented in any one actual system.

- Fourthly, integrity and paternity. In a physical world it is difficult, though not impossible, to change the content of a document. It is equally difficult to disguise its origins unless some sophisticated system of "cut-and-paste" is used. The best (or worst) than can be done is to remove the indication of the source. In an electronic context both of these actions are easy to perform. It is equally essential that they are prevented so that users know exactly what they are using and owners and creators are assured of the reputation of their products.
- Fifty, the problem of transformation, translation and adaptation. In the physical context it is comparatively difficult to carry out these actions and converting a text into a sound recording, three-dimensional form of expression or any other form is a complex and expensive business. In the electronic environment, it is very easy to achieve. If a work is "born digital" it can easily be converted into any output form the operator chooses; if the work is in original paper form then high quality scanning can soon convert it to the necessary format to be converted once again to another format as required.

Relevance to VIP's

Do all of these areas have relevance to VIP's and, if so, are they serious threats to owners or impediments to users? If the answer is generally "no" then why bother with licences at all? On the other hand, if the answer is generally "yes" then we need to consider the idea of a licence seriously. It must also be remembered that different needs of VIP's must be met by different processes and technologies so that the answer will rarely be simple.

- Firstly, copying. Clearly VIP's need to copy material either to produce a straightforward facsimile copy in large print or to digitise the work in order to output the text in whatever form is needed by the user.
- Secondly, transmission and publishing. Generally speaking VIPs do not have a need to publish material in the sense of making it generally available to the public. They may have a need to generate multiple copies but this would usually be within a named or easily identified community. However, transmission may well be a need in a modern context as, once a work has been digitised there is no point in using that version to produce, say, a Braille copy which then has to be posted from one user to another. It is just as easy to send the digital file to the user who may choose the form of output needed. This assumes, of course, that the user, or the instituti9on which supports them, has the relevant technology in the first place. This is an assumption which cannot be made in the majority of cases.
- Thirdly, Prevention. When considering texts in physical format the likelihood of unauthorised actions to a work are very small. Probably the most vulnerable will be seen as sound recordings. Therefore any prevention of further copying or transmission hardly arises. In any case, most sound systems for VIPs are specially designed for their use and not available to the general public. Whilst there is no evidence to show that VIPs are any better (or worse) than the general public in respecting/ignoring copyright, there is no reason to suppose that VIPs as such are likely to abuse their access to electronic materials. Nevertheless, it must be acknowledged that, once a work has been digitised, it is far more vulnerable to the infringements mentioned above than a physical version. Such files are often more

accessible and more easily used by others than physical documents. A digital file is a digital file and the purpose for which it was created is of little importance to the potential infringer.

- Fourthly, integrity and paternity. VIPs are most unlikely to want to interfere with either the content or indication of original of any document; on the contrary they will want guarantees that the text they use is as it was written originally and has not been tampered with by intermediaries who have, perhaps unwittingly, abridged the text or misread a word or scientific symbol. At the same time owners and authors will be anxious about exactly the same problem.
- Fifthly, the problem of transformation, translation and adaptation. This is perhaps one of the most controversial areas because this is exactly what VIPs need to do most often. Whilst making a copy in large print is clearly copying, converting a work to Braille or Moon or into an audio format is definitely adaptation. In some countries, using a work to make another work is not seen as an infringement but in many others this would clearly be treated as such. Whilst most owners would want to control translation or adaptation when seen as from one language to another or from a book to a play, the same threats can hardly be said to exist in the highly specialised realms of VIP needs. However, the technology to be used to achieve these adaptations is just as threatening for owners as mentioned earlier.

Licence or law?

Many countries do provide legislation which allows material to be copied for the benefit of VIPs. This is very useful but it is not necessarily a solution to many of the problems faced by those who need, or need to provide, material in alternative formats from those in which works originally appear. It can be limited by the amount of re-formatting that is allowed, the formats in which it can be produced, the person to whom it is available and, above all, is often open to challenge on various legal grounds. It leaves all those concerned with a feeling of uncertainty and some animosity as owners usually resent having such limits imposed on them, even if they would be entirely willing to licence such actions under the same terms as the law permits. In other words, owners feel they should be able to control their property and not have it forcibly given away for them.

There is another aspect of relying too much on the law. The law, because it is somewhat arbitrary in nature, will either allow reproduction in another format without compensation to the owner or it may set levels of compensation against which neither party can appeal. This puts the VIP in the situation of relying on a sort of state arranged handout and can be seen as degrading by a community which is quite capable of standing on its own two economic feet. VIPs do not want charity - they want equality.

Benefits of licences

Given this analysis, it is fairly obvious there could be a case for licences for VIPs to convert material into different formats. So what are the benefits?

- Firstly, licences establish a proper relationship between the owner and the user. By doing this, users can often build on this to ensure a better service for themselves or their users because the element of trust established between owner and user gives both confidence to suggest new areas of working together and can lead to some relaxation of the legal and binding agreements between them.
- Secondly, licences avoid ambiguity. Although the law in many countries gives certain privileges to VIPs, it is often vague or ill-defined and leaves many areas of uncertainty. A proper licence will spell out who can do what with what and for whom and in return for what payment (if any)
- Thirdly, licences can free the user to do many things which would not be permitted otherwise. Laws are fine as far as they go but the exceptions they set out are always limited and may not fully meet the needs of the VIP community.
- Fourthly, they allow both owners and users to reach parts of the market which would otherwise be closed to them. Owners wish to sell their products and users wish to buy them but the electronic delivery of information should allow the special formats needed by VIPs to be produced without any

additional cost to the owner. VIPs should not be prevented from having access to works just because the standard output is not in the right format but neither do VIPs wish to be on the receiving end of charity. They are willing to pay the normal market rate for material provided they can access it properly. At the same time owners do not see why they should be denied access to a potential legitimate revenue stream. In the physical world the debate is compounded by the problem of who will pick up the bill for reformatting material. In the electronic world this problem is still there because re-formatting requires advanced technology and production equipment but the burden is moved from the supplier to the user. Therefore owners should have no anxieties about allowing output of electronic materials in different formats.

- Fifthly, they put VIPs on the same footing as other members of society. Everyone obtains their electronic information through some form of licence. The VIP becomes just the same as everyone else but with slightly different licensing terms, tailored to meet their needs.

Drawbacks of licences

- Firstly, licences need agreement. This can cause a bureaucratic bottleneck in accessing material. The owner needs to have a licence in place and the user needs to be able to locate it. Both can cause delays which is to the disadvantage of the VIP if these procedures take longer or are more complex than for use by fully sighted people.
- Secondly, the owner may limit the forms of output for electronic materials and require extra payment if other formats are required. Such additional fees can be a major charge for the VIP, making access to material far more expensive for the VIP than for other users. Fees ought to be set at the same level for all users with no additional charge where output in special formats is required.
- Thirdly, the owner may refuse to grant a licence. Although this would seem unlikely to many people such refusal is more common than is often realised. Some owners of electronic resources are prepared to licence on-screen viewing only with printing out as an option in return for additional payment. This clearly discriminates against the VIP who will usually need to produce some kind of output rather than attempt to use material on-screen. Nevertheless some owners feel the need to be in control. Even if they are happy to allow output in many different formats at no charge to anyone, they still want the opportunity to agree or not. They strongly resent having their rights managed for them by some kind of compulsory licence even thought they think the terms imposed are reasonable and acceptable.
- Fourthly, owners may use licences to avoid the privileges given to various groups under national law. If VIPs (or any other groups) are given privileges to do various acts to copyright material without infringing the owners rights, they should ensure that these are not signed away in some form of licence or contract with the copyright owner. Unfortunately it is possible for this to happen without the user actually realising that such privileges have been lost.
- Fifthly, levels of licence fees are difficult to negotiate. Owners often take a "take it or leave it" approach to licences which may not be appropriate to VIPs (or others). There is often little room for negotiation which may result in fees that are far too high for the special requirements of different groups.

Who pays?

The whole question of who pays for access to materials for many groups in society is a controversial topic and not limited to VIPs so it is not appropriate or necessary to rehearse the whole argument here. Suffice to say that most people would agree that access to materials for VIPs should be on the same basis as regards time and money and under the same conditions as for any person entitled to access that material. There is an on-going debate about whether such costs should be met by the person concerned, the library or some other authority such as the local town administration, national social services departments or charitable organizations. This debate relates to the whole question of such concepts as "fair use" or "fair dealing" and is relevant to this discussion in those wider terms.

Conclusion

Licence fees can be both a barrier and an opportunity for VIPs and others. With proper; management and reasonable terms they can be the gateway to dynamic and rewarding services and give a chance for owners and users to work together for their mutual benefit. Badly constructed licences will always be a barrier to access and eventually will deny owners much of the revenue stream that they desire from such arrangements. They can clarify ambiguous legal situations and avoid unnecessary conflict but the terms may be onerous and seem unreasonable. Ideally what is needed is a licence which is acceptable to both parties with supporting law to ensure access for VIPs of a sensible licensing regime cannot be established. This is a pattern found in a number of legislations which can easily be adapted to this requirement.

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[1] Cornish, Graham P. Copyright management of document supply in an electronic age: the CITED solution. *Interlending & Document Supply,* 1993, 21 (2), 13-20.

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WIPO – Advancing Access to Information for Print Disabled People

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Abstract:

This paper examines the role of the World Intellectual Property Organisation (WIPO) as it relates to copyright and to visually impaired people's right to read. It starts by summarising the barriers that can arise both from refusal to grant permission for alternative formats and from the use of rights management schemes incompatible with screen reading technology. It refers to the need for international agreements as well as an accumulation of national legislation. It examines in some detail the workings of WIPO and highlights the criteria of the three-step test. It details contacts within the past year between WIPO, the World Blind Union and the IFLA Section of Libraries for the Blind. It then refers to the related roles of the World Trade Organisation and of UNESCO. It lists what ideally we would like to be able to obtain from WIPO in terms of national and international legislation, and asks what steps must be taken to achieve this. It is hoped that the paper will motivate people to contact their national governments and ask them to raise these issues within WIPO.

1. Purpose

1.1. This paper serves as a brief introduction to the World Intellectual Property Organisation (WIPO) and to the recent contacts between it, the World Blind Union (WBU) and IFLA's Section of Libraries for the Blind (SLB). I hope it will inform discussion on the best way to use international bodies to promote and protect the right of visually impaired people to equitable access to information. It is also hoped that it will prompt consequent action.

1.2. In most instances in this paper reference is made to "visually impaired people" or "blind and partially sighted people" (two terms used interchangeably) because that is my area of work. However, nothing that is written here is meant to deny the rights of other print disabled people.

2. Background - Copyright Barriers for Visually Impaired people

2.1. Where exclusive rights of production, communication to the public or distribution are not qualified by legislation, then the explicit permission of the rights holder is required before any information can be transferred – or should we say trans-formatted – from its original presentation into a format accessible to someone with a visual impairment. Traditionally these formats have meant braille, audio or enlarged print.

2.2. The new dimension presented by the electronic era means that visually impaired people can also access material using a personal computer, whether that material is on line or on some form of disk. Doing so involves some form of assistive technology, typically screen reading software which enables the material to be accessed by enlarged display, refreshable braille or synthetic speech. Unfortunately, information is sometimes presented in such a way as to prevent or impede the manipulation that is required to render it accessible to visually impaired people. This may simply be because the creator wants to control the way in which their material is displayed, or it may be for rights management purposes.

2.3. Thus, there are now two copyright-related barriers that may have to be surmounted before information can be accessed: the permission of the rights holder and the potential technological block of digital rights management schemes or other forms of presentation incompatible with screen reading technology..

2.4. Over the past decade or so a number of countries have introduced copyright legislation for the benefit of print disabled people (and usually not just visually impaired people). However, the technical developments referred to above mean that it may not be adequate for such legislation to assert that certain acts of trans-formatting do not infringe copyright and thus do not need the express permission of the rights holder. It may be necessary to find ways of obliging rights holders to make their material available in a form that can be manipulated sufficiently to allow equitable access by a blind or partially sighted person.

2.5. The electronic age has also totally changed the manner in which "hard" alternative formats are created. Any legislative solution therefore has to take account of the "transient" files created during the course of braille, large print or digital audio production.

2.6. Such files can very easily be transmitted electronically around the World. This can vastly reduce the need for duplication and can speed up access to material. IFLA Section of Libraries for the Blind aspires to a "virtual World library of alternative formats". The realisation of this concept depends in part on the eradication of national boundaries imposed by separate territorial legislation.

(Note: Some of the implications of digital technology for visually impaired readers were examined in the paper entitled: RIGHTS v. RIGHTS – WHEN COPYING IS NOT COPYING - How Copyright Impinges On Digital Media And Visually Impaired Readers, presented to the IFLA General Assembly in Amsterdam in 1998, available at www.ifla.org/IV/ifla64/049-124e.htm When that paper was written, however, we had not yet become so aware of the implications of technological protection measures and digital rights management.)

3. The Role of International Bodies

3.1. Naturally, we wish to see provisions for blind and partially sighted people introduced into the copyright legislation of countries who do not yet have such provision. However, an accumulation of national provisions is in itself inadequate, and an international arrangement needs to be reached if the electronic age is to bring its full potential to those using alternative formats. WIPO is one channel through which to achieve this.

4. The World Intellectual Property Organisation (WIPO)

4.1. The World Intellectual Property Organisation (WIPO) is an agency of the United Nations. It evolved out of previous conventions and organisations, dating back to 1883, and was established by a convention signed in Stockholm in 1967.

4.2. As of March 13, 2001, 177 nations belonged. This includes all the major powers such as China, the Russian Federation – and the United States!

4.2. Its headquarters are in Geneva, Switzerland, although it also has an office in New York which liaises with the UN agencies at UN headquarters and deals with the corporate sector in the United States.

4.4. WIPO's principal objective is to "promote the protection of intellectual property throughout the World through co-operation among states and, where appropriate, collaboration with any other international organisation."

4.5. It administers 21 treaties, of which six relate to copyright.

These are:-:

- Berne Convention for the Protection of Literary and Artistic Works, whose earliest Act dates back to 1886, with the latest Act dated 1971);
- International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (1961);
- Convention for the Protection of Producers of Phonograms Against Unauthorised Duplication of their Phonograms (1971);
- Treaty on the International Registration of Audio-visual Works (1989);
- the WIPO Copyright Treaty (1996, not yet in force) and the
- WIPO Performances and Phonograms Treaty (1996, not yet in force).

4.6. The last two treaties will come into force once sufficient member states have ratified them.

4.7. Attempts to conclude a treaty or a protocol on audio-visual rights at a diplomatic conference in December 2000 were unsuccessful.

4.8. The texts of all the treaties that WIPO administers are on its website, www.wipo.int or www.ompi.int. Almost all appear to be available in at least two formats (usually html and .pdf formats)

4.9. Other WIPO treaties deal with issues such as patents or industrial design.

4.10. WIPO has a body of permanent staff, but policy discussions and diplomatic conferences also involve representatives of the nations that belong to the Organisation.

4.11. Member states keep in routine contact with WIPO through their permanent missions to the United Nations in Geneva. This city is also host to the World Trade Organisation and the World Health Organisation, so diplomats posted to Geneva may carry a number of portfolios.

4.12. At diplomatic conferences and standing committees, states are likely to be represented by a member of staff from their permanent mission and civil servants from the capitals of the countries concerned. Politicians may also attend on some occasions, although this appears to be uncommon.

4.13. There is an annual meeting of WIPO at which member states agree budgets and work programmes.

4.14. WIPO is financed primarily from the income generated by services to industry, such as trade mark registration. Copyright work does not itself generate income, but is sustained from the other areas of WIPO activity.

4.15. The main forum for discussion on copyright issues is the copyright standing committee. When it is felt that a treaty can and should be concluded, a diplomatic conference is held. Diplomatic conferences and meetings of standing committees are also attended by Inter-Governmental Organisations (IGO's) such as UNESCO or the International Labour Organisation) and by accredited non-government organisations (NGO's), representing interested groups of people. In the case of copyright these would include rightsholders, creators or performers – and blind people!

4.16. At the discretion of the Chair, NGO's can speak in plenary sessions and in open committee sessions. Their presence also gives them the opportunity to distribute their literature and to attempt to buttonhole delegates.

5. Three Step Test

5.1. WIPO's attitude to the needs of people with a "print disability" has been one of benevolent tolerance. Under Article 9 (2) of the Berne Convention, member states are allowed to introduce exceptions to the exclusive rights of copyright owners if those exceptions comply with the so-called three-step test, namely:-

- They must be confined to certain special cases;
- These cases must not conflict with the normal exploitation of a work; and
- These cases must not unreasonably prejudice the legitimate interests of the right holder.

5.2. The copyright directive adopted this year by the European Union also subjects any of its optional exceptions to the same test (Article 5.4).

5.3. Subsequent WIPO treaties have all followed this "minimal" line, and the Organisation has not taken any steps actively to encourage provision for people with a reading-related disability.

6. Contacts with the World Blind Union and IFLA

6.1. The World Blind Union has had permanent observer status as a non-governmental organisation with WIPO since 1993. However, until recently it does not appear to have taken a very close interest in copyright issues. The exception to this would be its European regional body, which has been very actively involved in relation to the passage of the latest European Union copyright directive, 6.2. At its General Assembly in Melbourne, Australia, in November 2000 the WBU adopted a resolution on copyright. This was inspired by the resolution adopted by the Section of Libraries for the Blind at its meeting during the IFLA Assembly in Jerusalem last year. It pointed to the abuse of copyright as one of the barriers to equitable access to information; it called for international as well as national solutions; these should be based on legislation enshrining rights, not merely on licences streamlining procedures; it mentioned WIPO, UNESCO and international organisations of rights holders as the targets of future work.

6.3. A delegation representing the World Blind Union and the IFLA SLB visited WIPO in Geneva in December, 2000. I led that delegation, accompanied by Henri Chauchat, a member of the IFLA SLB copyright committee. Our pretext was to attend the opening days of a diplomatic conference on audio-visual Rights. We did raise issues surrounding audio description in this forum, but our main purpose was to make initial contact with WIPO and try to put our concerns on its agenda.

6.4. I was able to address a plenary session of the Diplomatic Conference, and we also had a 40-minute meeting with Jorgen Blomqvist, WIPO's Director of Copyright Law. We were able to distribute a briefing paper and speak to some of the delegates.

6.5. Mr Blomqvist advised us that, for any treaty to insist on exceptions, rather than merely tolerating them, the Berne Convention would have to be amended unanimously by its signatories.

6.6. The same delegation returned to Geneva on 11th June, 2001, for a meeting with Kurt Kemper, Director – Advisor in charge of copyright matters, Co-operation for Development (Intellectual Property Law) Department.

6.7. Mr Kemper's section provides advice to developing countries – virtually all of Asia, Latin America and Africa – who are either introducing copyright legislation for the first time or amending it. Under its agreement with the World Trade Organisation (WTO), WIPO does this even for countries that do not belong to WIPO but are members or aspiring to be members of WTO.

6.8. A separate section offers similar facilities to "countries in transition", i.e. most of Eastern and central Europe and the former Soviet republics.

6.9. WIPO offers model legislative provisions, including options, but currently these say nothing about visual impairment.

6.10. Mr Kemper undertook to look into existing legislation in some member states and to discuss with colleagues the possibility of including in future advice

a) the option of legislating for the needs of visually impaired people, and

b) some alternative ways of so legislating if countries chose to do this.

6.11. This would be welcome, but it is not the same as saying that WIPO would **encourage** member states t introduce such provision.

7. Other International Bodies.

a) World Trade Organisation (WTO)

7.1. For the past three or four years IFLA has been alert to the development of the World Trade Organisation, as demonstrated by the work of the Committee for Copyright and other Legal Matters, as well as in papers presented to the IFLA Assembly in Jerusalem in 2000. WTO is not a UN agency, but did sign a co-operation treaty with WIPO in 1995.

7.2. WTO sees intellectual property purely as a commodity. The Trade Related Intellectual Property Rights (TRIPS) Treaty of 1995 can be seen as ceding ultimate power over intellectual property from WIPO to WTO. See in particular Steve Shrybman's paper to that conference (www.ifla.org/IV/ifla66/papers/176-148e.htm),

7.3. The creation of WTO has pushed intellectual property up the agenda in many countries. They want to join WTO because membership opens up markets, and so they are prepared to accept the obligations of membership, which include copyright legislation and its implementation.

7.4. The TRIPS agreement had obliged many developing states as a condition of entry to introduce some form of copyright legislation by January 2000. The 40 least developed countries in the World have until January 2006.

7.5. WTO has teeth to enforce its rules – WIPO does not. WTO members can be brought to book at annual TRIPS forums, and have to submit to a mandatory dispute resolution procedure.

7.6. Nonetheless, Article 13 of TRIPS does re-iterate the circumstances in which exceptions to exclusive rights may be permitted, that is to say the three-step test of the Berne Convention.

7.7. Moreover, WTO has only a handful of staff dealing with copyright – WIPO has far more and so is still the source of expert knowledge and advice.

7.8. Nor did the existence of TRIPS prevent WIPO from adopting two major treaties in December, 1996.

b) The United Nations Educational, Scientific and Cultural Organisation (UNESCO)

7.9. UNESCO, too, has long taken an interest in copyright. In 1952 it adopted a Universal Copyright Convention. Its main aim was to ensure that no signatory nation would give its domestic authors more favourable treatment than that given to authors from other signatory nations. It also covers copyright notices and duration of copyright after death.

7.10. Where nations are signatories to both WIPO and UNESCO treaties, the former takes precedence.

7.11. In 1982, a "Working Group on Access by the Visually and Auditory Handicapped to Material Reproducing Works Protected by Copyright" was jointly convened by UNESCO and WIPO. It met in Paris from 25th to 27th October of that year, under the chairmanship of Mr Mihaly Ficsor. At the conclusion of the meeting, model provisions were adopted. The report of the Joint Working Group was discussed at the joint session of the Executive Committee of the Berne Union and the Intergovernmental Committee of the Universal Copyright Convention in Geneva in December 1983. Mr Ficsor has expressed reservations as to the adequacy of the Model Provisions. They appear, anyway, to have died away from the agendas of the two organisations. Reports on the Joint Group's work appeared in three different issues of WIPO's journal Copyright – See Appendix.

8. Conclusion

8.1. There is no shortage of legislation and treaties on copyright. Anyone wishing to spend the next decade doing nothing but study the matter should look at www.llrx.com/features/iplaw2.htm – and not only because its compiler, Stefanie Weigmann, is a Senior Librarian and Instructor in the Law School of the University of our host city, Boston.

8.2. The copyright laws of the major English-speaking countries of the World and the members of the European Union as they relate to access by visually impaired people are explored in two reports from RNIB, Copyright Law and the Rights of Blind People, to be found at www.rnib.org.uk/wesupply/publicat/copyr.htm and www.rnib.org.uk/wesupply/publicat/copyr2000.htm

8.3. While some individual states have legislated, our needs and rights do not appear to have featured recently on the international stage.

So, what do we need from WIPO and other international bodies?

8.3.1. We need international treaties that allow the creation of non-commercial alternative, accessible versions and their free flow across international boundaries..

8.3.2. We need national legislative regimes that are harmonised to ensure consistency for organisations, individuals and rights holders, protecting rights holders from exploitation and protecting visually impaired people and their agencies from unjustified barriers.

8.3.3. Equally, however, we need international treaties and harmonised national legislation which empowers member states to oblige rights holders to make available to bona fide blind and partially sighted people, and agencies working on their behalf, accessible versions of material ordinarily presented to the public wrapped in any form of rights management scheme, or protected by some other technological measure which renders them inaccessible to us.

8.4. The European Union directive followed the line of the Berne convention in allowing, but not obliging member states to introduce exceptions into their copyright laws for blind and partially sighted people (Article 5.3.b) – even though the overall purpose of the measure was to harmonise copyright provisions and strengthen the single internal market.

8.5. Interestingly, however, the directive does stipulate that, where such exceptions do exist, member states must take steps to ensure that rights holder make available to them the means of circumventing technological protection measures (Article 6.4.1).

To what extent can WIPO deliver what we need?

8.6. WIPO officials have shown themselves willing to listen to our concerns and to learn more abut them. They may be ready to advise member states on the choices facing them in relation to the access rights of visually impaired people. We have not yet reached the stage where we can be certain they would actually encourage member states to take account of our needs..

8.7. To push WIPO towards any element of compulsion on individual states, let alone a treaty about international exchange, will be a great deal more difficult..

8.8. Continuing pressure at the centre from WBU and IFLA will be of only limited avail if not re-inforced by each of us persuading our national governments to raise this on the WIPO stage, perhaps starting with the next annual meeting in September 2001 or the next meeting of the copyright standing committee in November 2001.

8.9. I stated at the beginning of this paper that one of its purposes was to stimulate action. The worlds of publishing and of information technology have dynamic energy far greater than that of any UN agency. Collaboration may come from within WIPO, but the drive and enthusiasm for change has to come from outside – and that, ladies and gentleman, is where you all fit in!

8.10. The respected Finnish copyright expert, Jukka Liedes, told us that the 1996 World Copyright Treaty had "taken a generation" to achieve. We had better start on our dream treaty today.

Appendix: references to the work of the UNESCO/WIPO joint working group, 1982, in the WIPO Journal "Copyright".

- issue dated December, 1982, pp354-356;
- issue dated February, 1984, pp60-62;
- issue dated September, 1985, pp283-284.

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Developing leaders for libraries: The Stanford-California State Library Institute on 21st Century librarianship experience

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BACKGROUND

> *"The unique quality of this [Institute] is that it takes a very non-librarian, non-traditional approach...The program is very enlightening and futuristic..."*
>
> *Summer 2000 Participant*
>
> *"I've had many opportunities to be proud as a librarian, but the week's experience at the Institute, living and working and enjoying the company of colleagues, was my best professional experience to date."*
>
> *Summer 2000 Participant*

Library leadership has become an ever increasing topic of discussion within library circles and professional associations. As the context of librarianship has become more complex, due to both the inherently increasing intricacy of the institutions of librarianship and the framework of information access and organization, so too has the need the need to re-examine the leadership requirements for libraries in the future become more important. Skills that were sufficient to manage and lead libraries within the past decades may not be sufficient to re-engineer and envision libraries of the future.

Approximately three years ago, Michael A. Keller, Stanford University Librarian, and Dr. Kevin Starr, California State Librarian, developed the concept of a leadership institute for library staff who were positioned within their institutions to begin to take on leadership roles. The concept of the Institute was two fold: to create a learning community of individuals who had self-selected onto a leadership track within libraries while simultaneously initiating discussion of the key issues and trends that would be impacting libraries in the near-term and long range future. The initial goals for the Institute were:

- Elevate the quality of services libraries and related bodies provide to information users in the 21st century through development of library leaders and managers
- Elevate the quality of services libraries and related bodies provide to information users in the 21st century by increasing the understanding and adoption of best practices in information technology

The concept was to address the nexus between the increasingly differentiated needs for library leadership and the impacts of information technology on how libraries were changing and operating. By better understanding the emerging concepts of information technology, leaders would be able to better understand the new dynamics of library leadership. Stanford University was considered the ideal setting for such an institution, due to its location in the heart of the information technology world in Silicon Valley and the University Library's international leadership role. The notion was that the Institute would become an annual event, eagerly anticipated every year by the library community, with an ever growing alumnae network of new library leaders.

GRANT FUNDING

> *"Librarians in California are fortunate that Stanford University and the California State Library were able to offer the Institute...The minimal tuition made participation possible for any individual or library organization in the state."*
>
> *Summer 2000 Participant*

As a result of the discussions between Keller and Dr. Starr, in late 1998 the Stanford University Libraries submitted an application to the California State Library for Library Services and Technology Act (LSTA) funds to initiate the development of the Stanford-California State Library Institute on 21st Century Librarianship. Library Services and Technology Act funds are a federal funding source under the administration of the federal agency, the Institute of Museum and Library Services (IMLS). IMLS provides block grants of funds to all state libraries, which then provide grant opportunities for libraries to apply for funding to develop and implement demonstration projects.

An initial grant was provided to the Stanford University Libraries to begin development of the Institute in the winter of 1999, followed by two subsequent grants in the fall of 1999 and fall of 2000 to actually implement the Institute.

ADVISORY GROUP

> *"I am applying the insights I gained into leadership. I came back ready to work with my staff in a deeper way and I already see the way my approach is paying off in the quality of work accomplished and in the attitudes of the talented people I work with. I feel that my understanding of technology and libraries has helped me make much better decisions."*
>
> *Summer 2000 Participant*

A key component of the Institute was the formation of an Advisory Group to provide input and direction for the development of the Institute. The members of the Advisory Group were chosen to reflect the diversity of types of libraries that would be participating in the Institute, as well as the geographic and cultural diversity of California. The original Advisory Group consisted of 20 library leaders, including academic and public library directors, school and special librarians, and library school deans, as well as other individuals representing consortia and the State Library. While the specific individuals making up the Advisory Group have changed somewhat over time, the constituencies represented have remained stable as well as the visible leadership levels of the individuals participating. The Advisory Group met for the first time in the spring of 1999 and has continued to meet three times yearly since then. The work of the Advisory Group has been vital in the development of the Institute in that the input has been from a respected group of library leaders in helping to shape and develop all aspects of the Institute. The Advisory Group also took on a significant role in the marketing of the Institute and developing credibility for the organization in its early stages.

INSTITUTE DEVELOPMENT

> *"I can't tell you how much looking at the "large issues" changed and recharged my outlook...and the word "stewardship" pops into my head at least weekly and I ask myself what I have done to promote "stewardship" in the broadest sense."*
>
> *Summer 2000 Participant*

In the summer of 1999 Anne Marie Gold, a well known public library administrator, joined the Institute as Executive Director and began planning for the first major Institute initiative, which would be a week-long residential program on the Stanford campus in August 2000. Additional staff for the Institute included an Administrative Assistant and a Digital Information Technologist. During late 1999 and early 2000 several shorter programs were held that introduced the Institute to primarily the California audience. The plan for the Summer Institute was that it be a weeklong immersion experience for up to 150 library staff who are committed to become future library leaders. The LSTA funding provided funding for 100 California library staff to attend with the intent that the remainder of participants would come from other states and countries around the world.

APPLICATION AND SELECTION PROCESS

> *"The institute is very different from other conferences. As far as I know, this is the first of its kind... This institute is cutting edge. We are, in essence, privileged to be part of it."*
>
> *Summer 2000 Participant*

In order to insure that participants in the Institute would represent a broad base of emerging library leaders, an application process was recommended by the Advisory Group. The decision was made that applications would be from individuals, not institutions, in order to insure a wide cross section of interest. Applications were not limited to individuals holding graduate library degrees but opened to all library staff interested in leadership issues.

Marketing efforts, both print and digital, were launched in January 2000, focused on a national and international audience of librarians and library staff. Print brochures were mailed broadly within California and nationally, and selectively on an international basis. A new section of the Institute website was launched with information concerning the summer program and the actual application document. Postings were sent to statewide, national and international listservs announcing the availability of applications for the Institute

The application process for the Summer 2000 Institute consisted of three major portions:

- A resume not to exceed three pages in length that detailed educational and job-related achievements as well as involvement in community and professional activities
- Letters of recommendations from two individuals
- Two essays on any of six topics relating to leadership, libraries and technology. One essay had to be a text document no longer than one page; the other essay could be a text document or in any other media of the applicant's choosing.

A selection process was designed whereby each application was reviewed and rated by two members of the Advisory Group. After reviewing all the ratings of the applications, final selection decisions were made, based on the desire to create a balanced group representing differing types of libraries and positions within libraries.

The application materials submitted presented a dynamic picture of new library leaders interested in building skills and networks. The option for use of media resulted in some exciting presentations such as a video interviewing the leaders in one applicant's library discussing their concepts of emerging library leadership. Perhaps the most interesting application began with an email from a librarian at the National Library of Swaziland who stated, "I have just receive a brochure about the Summer 2000 Institute and feel very interested in coming for such a meeting as this would widen our scope of what our libraries are likely to face in the near future."

After the lengthy application and selection process, in April 2000, 132 individuals were invited to participant in the Summer 2000 Institute. The participants selected came from a broad geographic basis, including 17 states, and 3 international attendees from Canada, Australia and Swaziland. 103 of the participants were from California (78%). The type of library breakdown was approximately 40% public and 30% academic with the remainder split evenly between school and special libraries. Approximately 15% of the participants represented culturally diverse backgrounds.

The professional experience of the participants varied widely:

5 years experience or less	10%
5 – 10 years experience	31%
10 – 20 years experience	27%
20+ years experience	31%

The types of libraries represented by participants were a broad cross-section, ranging from major academic institutions, urban public libraries, specialized technical libraries and small K-5 school libraries.

COMMUNICATIONS WITH PARTICIPANTS

> *"My goal is to develop valuable contacts and learn from other colleagues."*
>
> *Summer 2000 Participant*

In the intervening months between April and August, a listserv was launched for participants that became the primary communication vehicle between and among the Institute and the participants. While initially postings were informationally focused from Institute staff, within a short period of time the summer participants were enthusiastically sharing information with each about their backgrounds and interest. The participants began to interact with each other online – responding to each other's queries, asking questions about postings, and in general beginning the formation of the virtual community of learners that was anticipated by the Institute. The biographical information that was posted by each participant became the basis of a participant section of the website, which allowed everyone to get to know each other before arriving on campus. By the time the Institute began, there was already a sense of knowing who your colleagues would be which enabled a faster integration into the networking and learning processes so essential to the success of the Institute.

WHY PARTICIPANTS CHOSE TO ATTEND THE INSTITUTE

> *"I want to develop and sharpen my leadership skills, while envisioning the library of the future."*
>
> *Summer 2000 Participant*

Participants completed a pretest survey administered by the Institute evaluation consultant the first night of the program that asked why they chose to attend the Institute and what their expectations were of it. They noted the following most important reasons for attending the Institute:

Gain inspiration through the acquisition of new ideas – 53%

Develop leadership skills – 45%

Other areas of interest were:

Access to experts and resources on library issues – 34%

Networking with colleagues – 21%

Learning about the role of information technology – 19%

The primary concern expressed by participants was about developing and improving leadership skills. In particular, participants expressed a need to acquire the tools and methods of effective leadership as well as the skills needed to envision, plan and develop a vision for the role of libraries in the 21st century. Participants from academic and public libraries more frequently mentioned such desires. The majority of participants from school and corporate libraries cited a desire to acquire new ideas and insights about libraries and librarianship, as well as about new technologies and how to apply them at their home libraries. Networking was the most the second most common expectation for all but public librarians.

SUMMER INSTITUTE

> *"This conference has given me a broad perspective, helping me to see that as a group-whether as public, academic, school or special librarians-we are leaders and have strength in our ability to articulate the purposes of libraries, to model the principles of providing access to all, and to master the nuances of the new technology and adapt it to our goals."*
>
> *Summer 2000 Participant*

The Summer Institute began on Sunday afternoon, August 6 and ended on Saturday afternoon, August 12. The program consisted of a daily schedule as follows:

8:30 – 10:00	Opening Plenary Speaker
10:30 –12:00	Plenary Topic Discussion Groups
1:00 – 3:30	Topical Presentation Sessions
4:00 – 5:00	Case Study Groups

The plenary speakers addressed the five thematic tracks of the Institute:

- Leadership
- Information Technology
- Library Collections and Services in the Digital Age
- Organizational Effectiveness
- Preservation and Facility Planning

The list of all presenters for the week is included as Appendix A. The plenary speakers were intended to set the tone for the day and the thematic track and to present challenges to the participants for the purposes of discussion in the late morning discussion groups, which were facilitated by members of the Advisory Group. The afternoon sessions were more narrowly focused, discussing topical issues in libraries and presenting opportunities for discussion, dissention, and cooperative learning. The late afternoon case study groups were presented with topical case studies relating to the general themes of the Institute, and served as both opportunities for peer team building and problem solving.

Providing opportunities for more informal networking was an important focus for the Institute. Two evenings were spent off campus at social events, including a baseball game and a visit to a local technology museum. The other two on campus evenings included opportunities for optional classes, which were enthusiastically attended by the majority of participants.

The ambiance of the Institute was also important. Participants were made to feel part of a special group, hand-picked and headed towards success in their library careers. The setting on the Stanford campus contributed to the ambiance, as well as the carefully chosen social events and quality of housing and meals. What emerged was a high-spirited and collegial atmosphere. One participant commented "Librarians deal with people all the time, but rarely does anyone do anything special for them. It's so nice to have such an event that makes librarians feel special."

EVALUATION PROCESSES

> *"I have much better sense of myself as a California library leader; it has given me confidence and insights."*
>
> *Summer 2000 Participant*

In order to assess the impact of the Institute upon participants, an independent external evaluation organization, the Evaluation and Training Institute, was contracted with to do both pre and post tests of participants. A senior researcher from ETI was at the entire Institute, attended various sessions and interacted with participants on a daily basis. ETI then wrote a final evaluation report that provided important insight into the expectations of the participants and their evaluation of the presenters and activities. Virtually all participants completed both the pre and post test surveys.

A six-month online follow up survey was launched in February 2001 that had a response rate of approximately 26%. The participant listserv has remained active and is an indication of continuing participant interest in the topics and issues raised at the Institute.

In preparation for the Summer 2001 Institute, participants from the Summer 2000 session were invited to apply to be interns. The application process required participants to submit an essay outlining the impact of the Institute on their careers over the past year. Fifteen Summer 2000 participants submitted applications to become interns and six were selected.

INSTITUTE PROGRAM EVALUATION

> *"This conference opened up a world of ideas."*
>
> *Summer 2000 Participant*
>
> *"This conference is about advancing librarianship."*
>
> *Summer 2000 Participant*

A post-test survey was administered to all participants on the last morning on the Institute and asked participants to rate the presentations and logistics and provide information on how they planned on applying the information gained from the Institute.

Overall the participants rated their experience at the Institute as very satisfied with a 3.8 rating on a 4.0 scale. According to the ETI, "The high rating was not only due to the formal aspects of the Institute, such as the speakers, activities, and content, etc. but also due to the collegial and high-spirited atmosphere of the Institute." 86% of participants indicated that the Institute met their expectations. The remaining 14% hoped the Institute would concern itself more with the future of the profession and effective leadership strategies to cope with the dramatic changes presented by new technologies. 98% of the participants indicated that they would recommend the Institute to colleagues.

The results identified immediate impacts by participants in three important areas:

- Development of leadership skills and techniques
- Recognition of how technology is affecting libraries and the role of library professionals
- Importance of building networks and avenues of communication and cooperation across libraries

The development of leadership skills and techniques was the strongest outcome for all participants, regardless of type of library. A renewed interest in developing leadership skills, understanding leadership styles, evaluating personal leadership techniques and putting leadership into action was noted by many participants.

Participants awakened to a greater understanding of the impact of digital technologies on libraries, not only in terms of hardware and software applications, but also in terms of forms and genres of information, new avenues of information access, new instructional services and practices and new ways of distributing information. A heightened awareness of the need for risk taking was identified as part of the awareness of technology impacts, coupled with an apprehension about the changes taking place.

All participants also identified the need for broad based networking, particularly across types of libraries and outside the profession. One important outcome of the Institute was the cross-fertilization among participants from widely differing types of libraries.

In general, participants found the following experiences to be the most useful:

- Learning about leadership styles, skills and techniques
- Sharing ideas with colleagues as well as with those outside the profession
- Obtaining new ideas and sharing different perspectives on professional issues
- Learning about cutting edge technologies
- Gaining a sense of renewal and excitement about the profession
- Networking

An additional important outcome was the internalization of key concepts and themes. ETI commented "Participants internalization of key concepts and themes generated throughout the Institute was evident on many occasions." Specific examples relating to the presenter topics, such as task and process leadership styles (Kennedy) and personal leadership profiles (Manning) were cited as being mentioned frequently by participants during the week.

PLANNED APPLICATION OF INSTITUTE EXPERIENCE

> *"Step out of your comfort zone and lead your library the way you are supposed to lead today and in the future."*
>
> *Summer 2000 Participant*

With one of the major goals of the Institute to enhance leadership in libraries, an important component of the evaluation of the Institute is how participants utilized their experience in their home libraries. 94% of participants indicated an intent to utilize knowledge and skills gained at the Institute to make changes at their libraries. Improving leadership was the most commonly cited theme in which participants expected to make an impact. Improving technology and technology awareness was the second most common theme. The examples of the ways in which participants expected to utilize the Institute experience varied from the very general to the very specific, e.g.

- Take risks
- Consistently evaluate my leadership
- Incorporate an attitude of change about technology
- Work with staff to shift services to meet Gen Y needs
- Develop information technology workshops for other librarians
- Answer reference questions via email

The means by which participants planned on sharing their Institute experience and knowledge with colleagues varied widely. The most likely methods were through informal interactions and discussions with colleagues, formal presentations, meetings and reports and sharing Institute notes and handouts.

Many participants noted in private communications after the week to Gold and Keller how important the Institute had been to them. Several participants submitted comments such as "It was by and far the most valuable week I've spent in my professional career." and "I have just spent the greatest week of my professional career at Stanford".

OUTCOMES

> *"I have a new position in my organization and I think the Institute helped me get there and also is making me make better decisions than if I had not gone."*
>
> *Summer 2000 Participant*

An online survey for Institute participants, originally developed by ETI and created on Zoomerang, the web-based survey site, was launched six months after the close of the Institute with the URL sent to the participants via the listserv. The short survey consisted of six questions querying participants about how they had used the knowledge and experiences they had gained at the Institute. 34 participants responded to the survey, or 26%. Responses by type of library mirrored in general the participant population, with a slight over sampling from public library participants (55% response rate versus 40% participation rate).

Participants had followed through on their intention to share information about the Institute via the following methods:

METHOD	% WHO PLANNED TO UTILIZE METHOD	% WHO UTILIZED METHOD
Interactions and discussions with colleagues	91%	88%
Presentations, meetings and/or reports	67%	66%
Sharing handouts and notes from Institute	71%	69%

The major themes that emerged when asked how they were applying what they had learned at the Institute were around the issues of leadership and risk taking. One participant noted " I have an increased sense of urgency in my work. I am developing a bias for taking action, willing to take more risks, looking further out into the future..." while another stated "The Institute opened my eyes to a whole new exciting world. As a field, librarians tend not to be very change or future oriented, we tend to react to other forces. I now want to be part of change within my organization." Participants noted that they were more able to be perceived as leaders within their institutions and they used their knowledge of leadership styles to work more effectively with staff. When asked about their approach to challenges, participants responded that they felt more confidence when facing difficult situations within their work institutions and approached such issues with more openness. A participant noted that she had been involved in "several instances that, when I reflect on them, might have been different without the Institute experience." Participants also commented on the sense of the Institute as an opportunity for reflection and recharging, "...the Institute spurred new energy in me for a job I've had for a long while. Thinking about leadership away from the distractions of everyday was the boost I needed."

In response to a question regarding the implementation of new technologies, participants were less positive about their Institute experience. Most respondents noted that that they had not implemented any new technologies they were exposed to at the Institute. However, several participants did note that they had become more actively interested and involved in technology planning for their libraries.

In the intervening months between the Institute and the survey, several participants shared reports and presentations with their home libraries and to professional organizations about the Institute. Additionally participants published articles in professional journals such as Knowledge Quest and law library association newsletters that included comments about their Institute experience. Several participants have commented that they believe their Institute experience contributed to promotions for them within the past year, or success in seeking new positions in other libraries.

Summer 2000 participants were invited to apply to become interns at the Summer 2001 Institute. The application process consisted of a submittal outlining how they were using what they had experienced at the Institute. 15 participants submitted one-page summaries that provided a broad sense of how the Institute had impacted this group of individuals. Most interestingly, the intern applicants were able to cite some very specific actions/impacts over the past year as a result of their Institute experience, including:

- Implementation of a PDA medical applications program in a major medical library to support the needs of users
- Development of an interdisciplinary effort in an academic library to restructure the University's IT infrastructure with the library taking the leadership role focusing on its expertise in information management
- Reading more widely and pursuing more actively business models that can translate into good library management skills
- Involvement in a nationwide study on young adult library trainers and their effectiveness
- Decentralizing the management structure in the IT division of a large library
- Leadership of a county team planning an e-government website
- Development and implementation of a "mini" Institute at the home library, keynoted by Mike Keller

Many of the themes that had emerged in earlier evaluative materials – risk taking, leadership, interest in technology – were also present in the intern submittals.

FUTURE SUMMER INSTITUTES

> *"It wasn't until I started thinking about those who will be attending this year that I realized how much I did get out of the Institute. Overall, I feel I am more able to lead my library...As we look towards the future, there are great challenges facing us, but I feel better prepared and better able to handle them..."*
>
> *Summer 2000 Participant*

The second Summer Institute will be held August 5 –11, 2001. A marketing campaign similar to the one for the Summer 2000 Institute was launched in January 2001 with a similar application process. There will be 143 participants from 23 states and 2 foreign countries, Egypt and Singapore. 101 participants will be from California (70%). The type of library breakdown is 58% public, 16% academic, 13% school and 13% special. ETI will once again be conducting an evaluation of participants, both before and after the Institute.

SUMMARY

> *"Dr. Keller and I agree that this...institute establishes itself as the premier forum for development of future library leaders."*
>
> *Dr. Kevin Starr, State Librarian of California*

Achieving the broad based goals set out for the Institute:

- Elevate the quality of services libraries and related bodies provide to information users in the 21st century through development of library leaders and managers
- Elevate the quality of services libraries and related bodies provide to information users in the 21st century by increasing the understanding and adoption of best practices in information technology

will take longer than one Institute cycle. However, the results of the first Institute have proven to be impressive. Combining the immediate evaluative comments from the last day of the Institute with the longer term outcomes noted over the past year, it is clear the Institute participants both internalized and acted upon many of the ideas and concepts presented at the Institute. The strong focus on enhanced leadership and risk taking is particularly gratifying, given the continuing nature of the discussion within the profession regarding the difficulty in attracting and retaining new leadership in libraries.

A longitudinal sampling study of participants in the first Institute session should be initiated in order to track longer term, systemic changes and results from participation. At the Summer 2001 Institute the ETI researcher will be conducting a focus group with the Summer 2000 interns to gather continuing data on their application of Institute experiences and career impacts.

The Summer 2001 Institute will also be an important component in analyzing whether the content and context of the Institute can be continued and improved. Some changes from the Summer 2000 Institute, recommended by ETI, have been incorporated including change for the case study groups, more networking time and a stronger focus on leadership skill building.

Developing a sustainable business model for the Institute, independent of LSTA grant funding, will remain the foremost challenge. While Institute participants rated their participation highly, the cost of the Institute will continue to be an issue. During the initial LSTA funding phase, California participants were charged $275 for the Institute, inclusive of all fees and expenses, while out of state participants were charged $2,000. However, the full operational costs of the entire Institute, including all staffing and Summer Institute related costs, were covered by the LSTA grant. Since LSTA funding is limited to demonstration projects, it will not be the long term source of funding for full Institute costs. Given the nature of the low level of funding by most libraries for continuing education and staff development, the potential market for the Institute is likely not large, even taking into consideration its multitype nature. Options for alternative grant funding sources, as well as foundation and corporate funding, continue to be explored.

APPENDIX A – SPEAKERS AT INSTITUTE

TIME	Monday, August 7	Tuesday, August 8	Wednesday, August 9	Thursday, August 10	Friday, August 11
8:30 – 10	**LEADERSHIP PLENARY** **David Kennedy** ***The Warrior and the President*** **Gates HP Auditorium**	**IT PLENARY** **Andrew Leonard** ***The Deep Structure of Duplication*** **Gates HP Auditorium**	**LIB COLL/SVC PLENARY** **Mike Keller** ***This Magic Moment*** **Gates HP Auditorium**	**ORG EFF PLENARY** **Amal Johnson** ***Challenging the Management Status Quo*** **Gates HP Auditorium**	**PRES/FAC PLENARY** **Margaret Hedstrom** ***Digital Preservation*** **Gates HP Auditorium**
10:30 – 12:00	**Encina Discussion Group, Meyer 220** **Hoover Discussion Group, Meyer 184** **Lagunita Discussion Group, Meyer 260** **Leland Discussion Group, Meyer 183** **Tressider Discussion Group, Meyer 142**	**Ekaterina Walsh** ***Gen Y Information Use Patterns*** **Gates HP Auditorium**	**Encina Discussion Group, Meyer 220** **Hoover Discussion Group, Meyer 184** **Lagunita Discussion Group, Meyer 260** **Leland Discussion Group, Meyer 183** **Tressider Discussion Group, Meyer 142**	**Encina Discussion Group, Meyer 220** **Hoover Discussion Group, Meyer 184** **Lagunita Discussion Group, Meyer 260** **Leland Discussion Group, Meyer 183** **Tressider Discussion Group, Quad 240-101**	**Encina Discussion Group, Meyer 220** **Hoover Discussion Group, Meyer 184** **Lagunita Discussion Group, Meyer 260** **Leland Discussion Group, Meyer 183** **Tressider Discussion Group, Meyer 142**

TIME	Monday, August 7	Tuesday, August 8	Wednesday, August 9	Thursday, August 10	Friday, August 11
1:00 – 3:30	**LEADERSHIP** **Susan Kent** ***Getting Political*** **Meyer 124**	**LEADERSHIP** **Joey Rodger** ***Leadership for the Future*** **Meyer 124**	**LEADERSHIP** **Rita Scherrel** ***Librarian?*** **Meyer 260**	**LEADERSHIP** **Jose Aponte** ***Cultural Facets of Leadership*** **Meyer 183**	**LEADERSHIP** **Eugenie Prime** ***Assertive Leadership*** **Meyer 124**
	IT **Karen Nagy/ Don Intersimone/Mike Molinaro** ***Technology and Library Buildings*** **Meyer 220**	**IT** **Christopher Warnock** ***Ebooks and Digital Libraries*** **Meyer 183**	**IT** **Terry Winograd** ***Human Computer Interface*** **Meyer 184**	**IT** **Lois Brooks** ***Assistive Technology*** **Meyer 220**	**IT** **Lois Brooks** ***Support for Technology in Scholarship*** **Meyer 183**
	LIB COLL/SVC **Vickie Reich** ***LOCKSS*** **Meyer 260**	**LIB COLL/SVC** **Susan Kornfield** ***Copyright and Intellectual Property*** **Meyer 184**	**LIB COLL/SVC** **Patricia Brevick, David Loertscher** ***Information Competency*** **Quad 240-18**	**LIB COLL/SVC** **Susan McGlamery** ***Moving Reference to the Web*** **Meyer 260**	**LIB COLL/SVC** **Dan Greenstein** ***Digital Libraries and the Challenges*** **Meyer 220**
	ORG EFF **Mary Birchard** ***Social Entrepreneurship*** **Meyer 184**	**ORG EFF** **Susan Hildreth** ***Gen Y Information Use Patterns Discussion*** **Meyer 260**	**ORG EFF** **Richard Akeroyd** ***Using GIS to Describe Library Communities*** **Meyer 220**	**ORG EFF** **Judy Register, Mary Dolven** ***Joint Use Libraries*** **Meyer 184**	**ORG EFF** **Brian Treistad** ***Core Competencies and Libraries*** **Meyer 260**

TIME	Monday, August 7	Tuesday, August 8	Wednesday, August 9	Thursday, August 10	Friday, August 11
	PRES/FAC **Maria Grandinette, Connie Brooks** ***Preventive Preservation*** **Meyer 183**	**PRES/FAC** **Karen Nagy/ Don Intersimone/Mike Molinaro** ***Planning Library Buildings*** **Meyer 220**	**PRES/FAC** **Walter Henry, Karen Nagy and Don Intersimone** ***Disaster Preparedness*** **Meyer 142**	**PRES/FAC** **Deanna Marcum, Walter Henry** ***Digital Preservation*** **Meyer 124**	**PRES/FAC** **Richard Hall** ***Libris Design*** **Meyer 184**
7:00 – 9:00	**Marilyn Manning** ***Your Leadership Style and Its Effectiveness*** **Governors Corner Eating Club**	**Giants Game**	**Exploratorium**	**Marilyn Manning** ***Your Leadership Style and Its Effectiveness*** **Governors Corner Eating Club**	**Closing Dinner** **Bing Wing, Green Library**
	Michael Gonzalez ***Web Tools for Librarians*** **IC, Green Library**			**Michael Gonzalez** ***Web Tools for Librarians*** **IC, Green Library**	

67th IFLA Council and General Conference
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Code Number:	**171-147a-E**
Division Number:	**III**
Professional Group:	**Mobile Libraries**
Joint Meeting with:	**-**
Meeting Number:	**147a**
Simultaneous Interpretation:	**-**

Final Report on the Regional Seminar on Mobile Library Services in Indochina: from February 2001 and into the Future

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Abstract:
The Mobile Library Services in Indochina Workshop was carried out 18-24 February 2001 in Thailand and Laos PDR with participants (including resource persons and observers) from Cambodia, France, Lao PDR, Malaysia, Philippines, Thailand, U.S.A., and Vietnam.
Lessons learned from various activities (site visit, presentation, demonstration, display, discussion, observation, etc.) were lined out and put together as suggestions for the future. They include, for example, ways to bring more books to the remote areas (especially books in local languages), the importance of cooperation and support from various bodies, the need for training, discussion, workshops, study visits, etc., and many projects were proposed for implementation in the future.

The immediate actions suggested to be taken by IFLA are: 1. To prepare a long term plan for "Mobile Library Services for Sustainable Development", 2. To publish a book "Mobile Library Services in Indochina" as an IFLA publication, 3. To produce a video tape training package for mobile library service activities. This report along with all the suggestions is to be presented to IFLA at the conference in Boston.

Part 1. BACKGROUND REPORT

Mobile Library Services in Indochina: A Workshop 18-24 February 2001

Initiated by the IFLA Regional Office for Asia and Oceania (IFLA ROAO), the Project, "Mobile library Services for Sustainable Development" has been carried out since 1998 to study the possibility of using the mobile library concept in supporting sustainable development at the grassroots level. Support for this project came from the annual subvention provided by IFLA HQ and ALP. Later, a pre-proposal was submitted to the Japan Foundation Asia Center (JFAC) in an attempt to further the study to cover the Indochina region. With generous support from the Japan Foundation under the Small Grant Program (FY 1999), our team was able to visit Cambodia and Lao P.D.R. in March, and Vietnam later in May, to make preliminary contact and to study the possibility of future plan. The revised proposal was then submitted to the JFAC in May 2000.

The Project had reached an important stage when the JFAC approved a financial support under the grant program for the period October 1, 2000 - March 31, 2001 to support the organization for a one week workshop, "Mobile Library Services in Indochina". The workshop was carried out 18-24 February 2001 by the IFLA ROAO with the cooperation of the International Librarian and Information Specialist Group of the Thai Library Association (TLA ILIS), Mahasarakham University Library, and the National Library of Laos. Additional financial support from IFLA was provided through its Section on Regional Activities: Asia and Oceania, for the expenses of IFLA's resource persons.

The program consisted of a three-day study visit in Laos P.D.R. and Thailand, a one day seminar in Bangkok, and a final day (also in Bangkok) of group discussions to plan for the future. Participants were high-ranking library administrators and representatives from organizations supporting mobile library activities in Indochina.

The group of 16 workshop participants, which included 7 delegates from Indochina countries, 4 members of the organizing Committee, one overseas resource person, two secretaries and two cameramen, set out from Bangkok by a sleeping night train. The destination was Lao P.D.R. where two mobile library activities were observed and assessed (Ban Maknaonalong and Ban Houaxieng). After an overnight stay in Vientiane, the group crossed the border back to Thailand and was joined by another group of 4 observers and one coordinator in Nongkhai. The trip back to Bangkok was by bus. The group stayed overnight at Mahasarakham after visiting the University Library's Mobile Services and the Sirindhorn Isan Information Center. The last day visit was for the Chalermrajkumari Public Library at Borabu District, Mahasarakham, and the National Library Branch at Nakhon Ratchasima (Chalerm-Prakiet Ro Kao). All libraries visited were observed and assessed by the participants and observers using the assessment forms provided.

The Seminar Program in Bangkok at the Prince Palace Hotel started early in the morning when Dr. Namtip Wipawin, the Project Director, as the MC invited Dr. Pensri Guaysuwan, Chair of the Organizing Committee, to present her report. Mr. Yoshio Takano, the Japan Foundation Representative, was then invited to deliver his address, followed by the address from the IFLA Representative, Khunying Maenmas Chavalit, who also opened the Seminar and presented her keynote speech. After a short break, Professor Thelma Tate of Rutgers University (U.S.A.), Chair of IFLA Roundtable on Mobile Libraries, introduced IFLA and its mobile library work in a global perspective. The program continued after lunch by the presentation of "Experiences from some Neighbor Countries" by Mrs. Datin Paduka Shahaneem from the Selangor Public Library (Malaysia), and Mrs. Arunwan Pimpapatanayo- thin and Mr. Sopon Sud-iad from the BMA Public Library (Thailand). The late afternoon sessions featured the NGOs who are involved with mobile library and related work in the region. The speakers included Mrs. Chanthasone Inthavong from the Association for Sending Picture Books to Lao Children (Japan), Mrs. Sachiko Watanabe from the Ohanashi Caravan Center (Japan), and Ms. Sachiko Kamakura from the Shanti Volunteer Association (Cambodia). The evening session was a reception with buffet dinner and some light entertainment. Mr. Yutaka Homma, Director of the Japan Foundation Bangkok joined the party and presented his welcoming address.

The last day of the workshop was used for group discussions. Dr. Sujin Butdhisuwan as the MC invited the Chairperson of the Organizing Committee to summarize the study visit and introduce the topics for group discussion. These topics were collected from "Participation Forms" filled out by the participants before they came to the workshop. The list of "Focus Group Discussion Topics/ Questions" prepared by Professor Thelma Tate, and "Some Draft Concepts on Strategic Planning for Mobile Library Services" by Khunying Maenmas Chavalit, were also distributed as guidelines for discussion. Participants were asked to group themselves into five groups by country / language, and pick a topic to discuss. The results were then reported to the Seminar by each group representative and all participants further discussed them. Then 3 projects (training, translation, and strategic planning) were picked for further discussion by the 3 groups in the afternoon sessions. After the reports from the three groups, the Chairperson then summarized the results of the workshop and re-affirmed the participants' commitments, she then declared the workshop sessions closed.

Participants and observers enjoyed the additional programs/papers brought in by fellow participants, resource persons and observers. Two mobile library bus/van were brought to the hotel doorsteps for inspections. A few video presentations were shown during the breaks, many additional papers and phamplets were handed out, and there were also demonstrations of reading promotion/story telling techniques.

This workshop provided many opportunities for informal contacts. Many problems/projects were discussed outside the formal sessions. We heard of some old problems which were solved and some new plans were made. In the final "Evaluation Form", most participants and observers expressed satisfaction with the workshop. At the conclusion, they agreed to bring back ideas to be used in the development of future projects for their own countries and for the region. Many commitments were recorded and they will be followed up by the organizer as well as participants and parties concerned.

Part 2. WHAT HAS BEEN LEARNED

From the Visits

Using the form provided, participants found the following of interest:

1. The reading promotion techniques and the creativity in teaching children critical thinking skills, the use of origami paper cutting art to teach biology lessons and the lively demonstration of story telling role play. The enthusiasm of the Laotian children for the activities provided at both sites visited, were remarkable.

2. The support from non-government bodies, foundations, volunteers, as seen in Lao PDR was seen as a very good example. The cooperation of cultural activity with the library and the community involvement, the idea of having a diversity of people groups and funding agents to plan and develop or enrich library services, could be applied to other countries. Participants saluted the efforts put forth in the various programs to provide reading opportunity to children and people in remote areas.

3. Another good example pointed out is the effort to translate English and Japanese words into the local language. Recognizing the need for more reading materials in Lao P.D.R., the translated texts were placed with the pictures in foreign language books, and this method is a perfect solution for their needs.

4. In Thailand, at Mahasarakham University, participants were very impressed with the well arranged Sirindhorn Isan Information Center. The Mobile Library Service Unit which is attached to the University Library, was started by outside support and later carried on by the local authorities. The example of mobile "knowledge bags" seen here, is the one outreach activity that most participants feel applicable in their countries.

5. Libraries should provide all kinds of information needed for the community: books, AV materials, various displays and a museum were observed with interest at the Borabu Public Library. Participants recognized the close cooperation between the school and public libraries, also the good example of building a library in honor of the beloved Princess from collected donations. Other points of interest to most participants were the provision of a mobile unit to follow the governor's team when they visit villages, and the active participation in the school and community activities.

6. Participants felt that the well designed bus and van as seen in Bangkok were suitable to serve communities in the urban areas, and for outreach to schools and communities in the rural areas, but because of the cost for operation and maintenance the vehicles are unaffordable for many countries.

From the Groups' Discussion

In the morning session, we learned of a national project which set up a national library system, from the government level down to the local level in Lao PDR; the steps for a project to receive books donated from a Vietnamese outside Vietnam; the necessary government channels to go through in order to receive books donated from outside the country of Cambodia; the mobile library services in Thailand; and a project to translate books in academic settings (Thailand and U.S.A.).
The three areas identified as most needy: training, translation, and strategic planning, were discussed by the three groups in the afternoon session. We learned of a plan to train para-professionals on reading promotion activities in Cambodia. Vietnam and Lao PDR were also expressing interest in hosting a training course for professionals and non-professionals. The Malaysian resource person volunteered to carry out a training project on "Strategic Planning" in Malaysia. The team at Srinakharinwirote University and the American resource person agreed to explore further on a translation project.

From the Participants' Evaluation

Participants (full participants, speakers, observers, and invited guests) expressed highly satisfaction with the workshop. They all indicated that the workshop was very useful and productive. They had a chance to learn from one another. The long travel period by train and bus offered them a chance to spend days and nights together which lead to closer friendships and mutual understanding, thus facilitating for possible future cooperation.

There were, however, some suggestions for the future organization of the workshops. Many expressed interest in a wider coverage of areas to be visited: more visits and more activities/demonstrations, and more participants from various areas should be invited. one participant, however, was suggesting the use of slides and videos instead of the traveling, since the long trip could be too tiresome. Some participants wanted to hear more presentations from small organizations working in the areas, and felt a need for more time for the discussion sessions. It was noted that the central organization in charge of the mobile library project, the national library, and all other organizations dealing with the mobile library and similar mobile services were not yet included in the workshop. One participant frankly mentioned that the seminar room was a little too small.

Part 3 SUGGESTIONS

General Suggestions

Suggestions collected from all participants are grouped as follows:

1. Exchange of ideas and experiences between libraries in different countries were identified as most useful. It was suggested that participants should have more time during the visit to meet and discuss the

activities/libraries observed, on the spot. It was further suggested that establishing a direct contact between libraries of neighboring countries could be most beneficial. Examples from one area could be useful for other Asian countries and elsewhere.

2. Libraries need to provide more activities to promote reading and the use of the library. Cooperative work like the "Vientiane Caravan" was ideal to many participants, but they felt they would not have the staff or skilled people to accomplish the same. Many participants agreed that it was essential to find a way to keep experienced personnal.
3. Schools in Lao PDR need more books in the local language. This problem is identical in many countries. There were various suggestions for book acquisitions, maintenance, and utilization from the participants. Also, there were discussions of the need to find the way to get books to these countries.
4. Mobile libraries are still in need while there are not enough libraries in the rural areas to serve the disadvantaged groups and they need more support from all sectors concerned.

A key to success in Mobile Library Service is how to get the support from the local community. One participant suggested that attracting more research and other projects from the academic community in developed countries, could be another way to reach out for more funding.

5. Cooperation with various bodies: church, parents, school, community center, local, regional government, etc. is needed.
6. Mobile library services should reach all groups of people in the community, e.g. elderly, blind, priest, farmer, etc.
7. Bringing together greater support and finding a way to establish a stronger buying base (funding) is needed.
8. A change of education and training is necessary.

Future Workshop

Participants suggested the topics to be added to future workshops as follows:

1. Administration and library planning, strategic planning for mobile library services, practical aspects, budgeting, organization, and management.
2. Assessment of mobile library impact on reading skills.
3. How to encourage and accomplish local creation of children's books
4. Writing good proposals for financial assistance
5. Reading for all or books for all and mobile library activities in practice
6. Practical problems of mobile library services and how to overcome them
7. Discuss local contents and oral history
8. Mobile library service for ethnic population in remote areas
9. Activities for anti-illiteracy campaign.

There were also suggestions for various kinds of workshops to be organized:

1. Invite all the organizations working in this area and conduct conferences like this once a year in the Asian Region to share experiences and exchange ideas.
2. Organize a similar workshop for other countries in the region
3. Have another workshop for Indochina countries with more features: exchange of field activities, reading promotion techniques, and some joint performances.
4. One participant expressed the need for "know how" of strategic planning and the ways to convince the government. Another participant suggested that the group should "make a statement together".

As for the training, participants suggested the following subjects:

Multi-user technique groups
Assessment needs
Evaluation of projects
Preparation of materials and activities

Projects

Participants suggested the following projects:

1. Obtain second hand books from overseas
Write children's books in many languages, print books from recycled paper, plastic, or fabric.
3. Build a network of cooperation between organizations whose missions and goals are identical, e.g. have a network of organizations whose work deal with mobile library services and reading promotions. There should be a meeting among them, to plan and work together. The project should start small and extend to a larger one later.
4. There were also a suggestions to follow-up and continue with several library services that are not mobile library projects but have the aim to reach out to the people in remote areas, e. g. village libraries.
5. Compile a directory of mobile library services in the region
6. Produce videos to demonstrate various mobile library activities
7. Survey the state of development in the region
8. Print children's books on fabrics or some other non-paper materials
9. Plan to do "Research into the history of Mobile Libraries", all participants should be part of the project

Part 4 PLAN FOR THE FUTURE

Following the workshop, participants continue on with their contacts and cooperation according to their own and mutual interests. The follow-up activities at the IFLA Regional Office in Asia and Oceania include:
1. Two follow up letters to all participants in Indochina countries.
2. The Newsletter of the IFLA Regional Section for Asia and Oceania June 2001, published the Report of the Mobile Library Services in Indochina Workshop, and it was mailed to all participants.
3. Various telephone calls and E-mail exchanges between the participants and the Regional Manager.
4. Some preliminary survey has been made into the possibility of publishing children's books on non-paper materials. The procedures to go through for copyright permission are still need to be explored.

From the above communications, the following was learned:
1. The National Library of Cambodia is working on a project to translate two books from French into Khmer and a proposal was also submitted to secure funding.
2. Another participant from Cambodia is also writing a regional proposal to carry out a training program.
3. The National Library of Laos is continuing with the project to expand the mobile library services to cover the whole country.
4. The Malaysian resource person is preparing a project to carry out a Strategic Planning Workshop in April or June 2002 to be held in Malaysia
5. The Vietnamese participants are also developing proposals to seek funding for projects to be carried out in Hanoi and Ho Chi Minh City (for story telling and book review projects)
6. The Department of Library and Information Science, Faculty of Humanities, Sri Nakharinwirote University, organized a two-day workshop (6-7 August 2001) to acquaint students and librarians with professional translators and experts in the field. They had a chance to learn about translation technique for children's books, and they enjoyed the various experiences told by each of the speakers. They also had a chance to practice translating some selected books. The team has a plan to produce a translation manual that, hopefully, can be used as a training manual in the future. Also, a plan for the translation of children's books (Thai-English, and English-Thai) is underway.
7. Learning from the workshop, the Director of Sripatum University Library has initiated an outreach program for the mobile unit from the University Library to service school libraries in the nearby areas.

Putting together all the observations, appreciation comments, suggestions, and updated information received from the participants, the plans for the future might be:
1. To propose a long-term plan for the future which should include further cooperation among the IFLA groups and relevant organizations in the region. IFLA Professional Priorities as adopted by the professional Board of IFLA (December 2000) will be observed. The project should aim to support activities, which promote literacy, reading, and lifelong learning and it should also support activities that provide unrestricted access to information. The concept of "Mobile Library Services for Sustainable Development" will be the framework of this mission under the assumption that "information and knowledge are the driving force for societal productivity and citizen's well being."

2. Observing that papers presented and contributed to this workshop are very high quality, we hope that the first proceeding, which collected so many good quality articles will be further edited and published as a book by either JFAC or IFLA.
The video tape, a very precious by-product, although our first experience turned out quite good. We are hoping to be able to use it again and again as it is, and in the future, we may develop a mobile training package, which will utilize more of the audio-visual media.

This summarizes the development of the mobile library project up to the present and we plan to continue along these lines into the future. We know this IFLA conference (The 67th IFLA Council and General Conference, August 16-25, 2001, Boston, U.S.A.) will give us more concrete ideas for our future plans.

Pensri Guaysuwan
August 12, 2001

67th IFLA Council and General Conference
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Mobile libraries in Vietnam in 21st century

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Abstract:

Vietnam is a small country in Southeast Asia, two thirds of the area are mountains, the population is 78 million, but the contribution of population is uneven, Vietnam's economy is ranking among the poorest counties. The Vietnamese Government has made much endeavour, however, as the result of the economic and geographical difficulties, millions of people in mountainous and farmost areas have not had an access to books and newspapers enjoyment.

With the encouragement from IFLA and the support from the Government, over 150 mobile libraries have been established and in active operation for the last 10 years. Various models of mobile libraries suited to different areas have been identified such as "Libraries on Cultural boats, Book bags of border guards, Bookcases of Commune Cultural Post offices" etc. The role played by the Government in supporting mobile libraries is a very good experience (the Government has provided the support of 427 billion VND, equivalent to 33,2 million USD for 400 district libraries and 1,100 school libraries for the last 7 years). Mobile libraries have been recognized as the most suitable and effective model in realizing the equality to enjoy culture and information in the poor regions.

In the 21st century, with the development as it is now, 10-15 years later Vietnam will still face difficulties, it will not be easy at all to overcome the poverty and backwardness. The difference of cultural enjoyment among various regions will be existing. This explains as to why the Government advocates to continue developing mobile libraries. This is a strategic measure to improve the cultural life for the population, to carry out well the Declaration of UNESCO, particularly, the guidance from IFLA "Libraries as Gateways to an Enlightened World... Books for All. All for Books..."

The Vietnamese Government has just promulgated the Ordinance on Library and approved the support programme for District libraries and School libraries in the 2001-2005 plan. This is a solid basis for mobile libraries to develop, "Delivering Lifelong Learning Access Across Space and Time", to create might to improve life.

1/Brief outline on Vietnam - the country and the people

* The Socialist Republic of Vietnam is located on the Indochinese Peninsular, near the centre of the Southeast Asia. Vietnam has its mainland borderline of 4,510 km. It is bordering China in the North, Lao People's Democratic Republic and the Kingdom of Cambodia in the West and overlooking the Pacific Ocean in the East and in the South.

On the map, Vietnam's mainland has an S-shape. The mainland extends from the northernmost point at latitude 23°23' north to the southernmost point at latitude 8°27' south, covering 1,650 km (as the crow flies). Vietnam is in the tropical monsoon, sunny and rainy climate.

Vietnam covers an area of 330,991 square kilometers of mainland and approximately 1,000,000 square kms of coastline.

Vietnam has a variety of topographical types, and it is a country of numerous mountains, dense rivers, plateaus, plains and coastline.

Vietnam's mountains and hills account for two thirds of its territory. Mountains are majorly concentrating in 13 northern provinces.

There are as many as 2860 large and small rivers on the territory of Vietnam. The Cuu long river (Mekong) is the largest with the area of over 4,900 square kilometers, including 13 provinces, cities in the south of the country. Annually, in rainy season, these areas are overflowed, resulting in farmost areas. Overland transportation in rainy season is quite difficult.

* By 1999, the population of Vietnam is estimated at about 78,000,000, ranking the 12th in terms of population in the world.

The population of Vietnam is unevenly distributed among different regions of the country. Plains account for only one fourths of the natural areas but three fourths of the country's population are gathered in plains. The population density in the Red river delta in the north is 1,142 people/square kilometer, in the Cuulong delta in the south is 406 people/square kilometer. Meanwhile mountainous and midland regions account for only 112 people/square kilometer, plateaus account for merely 56 people/ square kilometer.

There are 54 races living on the territory of Vietnam.

There are 61 provinces, cities, 609 districts (129 districts in the mountainous area); 10,331 communes (1,941 communes in the mountainous area).

At present, approximately 80% of the Vietnam's population are living by involving in agriculture, forestry and fishery in rural, mountainous areas. Lives of farmers have been improved; however, life is still difficult. On the average, annual income is under 400 USD a head. Vietnam is accounted among one of the poorest countries in the world.

2/ Culture

Vietnam has the time-honoured culture full of specific features and deep national identity.

In 2000, Vietnam was recognized as a country that has completed the Programme on Primary General Education and Anti-illiteracy by UNESCO.

Along with education, Vietnam's culture has made tremendous progress. The Vietnamese government has advocated to develop the culture and the economy at the same time. The Government has defined: " Culture is the spiritual foundation of the society, the aim and impetus for the socioeconomic development". On the way to integrate into the world community, Vietnam is persistent to follow the direction to build up an advance culture full of national identity. The improvement of cultural life for people in rural, mountainous areas, particularly in highland, farmost areas is one of the top important tasks.

In the culture of broad range, "Reading culture" Library is a spearhead. Over recent years, the Vietnamese Government has been well aware of the importance and great effects of library activities on social life. Librarianship of Vietnam has made progress in both quantity and quality. At present, 4 library systems with over 20,000 libraries, bookcases in operation through out the nation comprise:

- Education library system:
    - 250 academic libraries
    - 13,500 school libraries

- Military library system: over 1000 libraries and bookcases

- Library system in research institutes, scientific institutes and information centres includes 300 libraries.

- Public library system:
    - The National Library
    - 61 provincial libraries
    - 540 district libraries
    - 7,500 libraries and bookcases in communes and villages

To fulfill the job of enhancing cultural life for people in rural, mountainous areas, rural library system and bookcases have vigorously developed, been diversified, suited to geographical, economic, cultural features of respective areas. Typical models are:

- Commune libraries
- Commune libraries in combination with schools
- Pagoda libraries
- Rong house libraries
- Libraries on Cultural boats
- Bookcases of Frontier posts
- Libraries of Cultural Villages
- Law Bookcases of communes
- Libraries of Commune Cultural Post offices

Bookcases, reading rooms in the Commune Cultural Post offices are models of high efficiency; this kind of service has been in operation for the last 3 years. This is a combination between economic activities and cultural activities of Culture and Post office. Up to now, 4,500 Commune Cultural Post offices have been established in approximately 50% communes of the whole country. Every Commune Cultural Post office has bookcases and reading rooms to serve farmers free of charge.

As a result of the above efforts, annually, there are over 15 million batches of farmers coming to enjoy books and other materials, search information in the library system, rural and mountainous bookcases. However, the capacity of meeting farmers' demands for reading is less than satisfactory. Newly published materials are not frequently acquired. The budget for maintaining these libraries, bookcases comes from the contribution by the public, so it is not stable. Approximately 40% communes have not established libraries or bookcases. Tens of millions of people have not had an access to materials and information enjoyment. Meanwhile, provincial and district libraries have abundant capability to serve reading requirements.

This explains as to why mobile library services in Vietnam have been established.

3/ Mobile libraries

- Targets: Deliver books, newspapers from provincial, district libraries to rural, mountainous areas to serve people living in places where there is no library or to support poor libraries that are unable to provide people with reading services.

- Principles: Diversify different forms of mobile libraries to match with geographical and population features and financial abilities of respective areas and district libraries.

Up to now, 150 mobile libraries have been established and operated in the major following forms:

Mountainous areas: Mobile libraries are organized in each district, focussing on districts in highland areas. Mobile libraries are combined with literature and art group and mobile information group to be a synthetic cultural group. This group makes monthly trips to highland communes to serve people. Means of transport for this mobile services are minibuses, motorbikes, horses, bicycles, and on foot...

In the border areas, the recipients of books from mobile libraries are bookcases of frontier posts. Border guards will shoulder rucksacks and bags of books to serve villagers.

Plain, coastal areas: Mobile libraries on minibuses and motorbikes are conducted, priority is given to communes far from the centres. Books are delivered to islands for services in some coastal provinces. Some of commune cultural post-offices in these areas have become recipients and distributors of mobile libraries' materials to the public.

Cuulong Delta areas: Mobile libraries are organized on culture boats. Periodically, every month culture library boats recruit along rivers and make pauses at arranged stops to provide the public with reading, book loan services, performances of art and literature, film shows.

In short, over recent years, thanks to the development of mobile library services, a great number of people in mountainous, farmost areas have had the equality of enjoying culture, reading materials, receiving information, enhancing knowledge to improve life. Mobile libraries have virtually become messengers to bring knowledge to the public.

4/ Support from the Government to facilitate mobile libraries to develop

Each locality has it own geographical features, population and economy, so Vietnam has advocated to organize mobile libraries at district level as the key force to share collection with mobile libraries. Much support will be provided to mobile libraries if district libraries are powerful, having copious collection.

Based on the facts of districts libraries, particularly district libraries in highland areas, for the last 7 years (1994-2000), the Vietnamese Government has been carrying out without delay the programme on support for district libraries valued at 427 billion VND, equivalent to 33,2 million USD. The contents of the programme are as follows:

- Book support programme for 400 district libraries with total value of 17 billion VND, equivalent to 1,5 million USD

- Construction programme of 30 district library buildings in extremely difficult regions valued at 8 billion VND, equivalent to 600,000 USD
- Book support programme for 11,000 school libraries valued at 50 billion VND, equivalent to 4 million USD
- Programme on the establishment of 11,000 bookcases on Law valued at 52 billion VND, equivalent to 4,1 million USD
- Construction programme of 5,000 Commune Culture Post-offices valued at 300 billion VND, equivalent to 23,000,000 USD.

While the country is still poor, the support for library activities from the Government in recent years is of great value. This is one of the important factors, deciding the existence and development of mobile libraries in Vietnam.

The Government has approved the programme to continue supporting books, facilities for district library system and school library system in the 2001-2005 plan

5/ Vietnam mobile libraries in the 21st century

Vietnam advocates to continue developing the model of mobile libraries and improving the quality of mobile library services

Bases of this orientation are:

- The outcomes of practical activities for the last several years have themselves affirmed that mobile library is a suitable, economic model in improving cultural life for the population in mountainous, farmost areas

With the restricted capability of developing the country's economy, Vietnam should continue maintaining and strongly developing the model of mobile libraries for the first 10-15 years of this new Millennium at least

- Along with the modernization of Central library system and Provincial library system, the promotion of developing mobile libraries is a right combination between modern libraries and traditional libraries, guaranteeing the access to books and newspapers of the entire population

- Mobile libraries identity with the spirit of 1994 UNESCO Declaration: "Public libraries provide an access to the knowledge at basic level, guaranteeing fundamental conditions for continuous study, self-decision and for cultural development of individuals and communities"

This Declaration shows the belief of UNESCO in public libraries as active forces having influence on popularizing education, culture and information, as well as the most important factor to help solidify peace and spiritual life in mind of males and females

- Mobile library is a basis to realize the guideline of IFLA "Books for all. All for books", providing the population of different areas with good conditions to enjoy the equality to search information and read books, newspapers. Libraries deserve the status as IFLA has affirmed: " Libraries as Gateways to an Enlightened World", in which, mobile libraries have really served at any time in anywhere to guarantee the life long study for everyone.

- Naturally, mobile libraries need to be improved in quality of service. The improvement may be a combination of reading and audio-visual services, promoting electronic books (CD-room), or mobile libraries should be combined with other sectors to be more appealing and to build up a sustainable reading movement. Particularly, means of transport should be better equipped as other countries' mobile libraries

* Orientations for mobile library development in Vietnam in 2001-2010-2015 are feasible as:

- In February 2001, the Vietnamese Government promulgated the Ordinance on Librarianship. The Ordinance affirms the right to read books and newspapers of the population, the Government, authorities at all levels, branches in charge of activities for the maintenance and development of different forms of libraries. The first time ever, in the history of Vietnam Librarianship, the position and roles of Library have been correctly affirmed as it has already been:"...Library is responsible for preserving the national written heritage, collecting, possessing, providing the common use of the Library's collection to the population to publicize the knowledge, provide information, meet the demands for learning, study and entertainment of the population of different classes, contributing to the improvement of the population's knowledge, training human sources, fostering gifted people, contributing to the development of science, technology, economy, culture and the industrialization, modernization process of the country" (Ordinance on Vietnam Librarianship)

- The Government has approved 5 year support programme for library 2001-2005 in the cultural development programme

The consideration from IFLA, the support from the Vietnamese Government is bases to guarantee the development of Vietnam mobile libraries in the future.

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Justin Winsor, 1831-1897, at Boston Public Library and Harvard

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Abstract:

Justin Winsor (1831-1897) was president of the American Library Association from its founding in 1876 up through the conference of 1885, and president again in 1897. During his career he also headed the Boston Public Library (1868-1877) and then the Harvard University Library (1877-1897). Now he is known primarily as the leading exemplar of the "scholar-librarian." This paper examines the criteria for professional leadership at the end of the nineteenth century in the United States, and it indicates that Winsor's understanding of libraries and his accomplishments as a librarian brought him to the fore. The paper also suggests that Winsor's turning to scholarly pursuits may have resulted from his being unable to accomplish as a librarian what he wished to at Harvard.

Justin Winsor (1831-1897) is not nearly as well known to librarians of the twenty-first century as is Melvil Dewey. He did not create a classification system. He did not start the major journal in librarianship; he did not establish the first library school; and, certainly, controversy does not swirl around his name. Yet, Justin Winsor was the first president of the American Library Association (ALA); and he was not just the first president. He was chosen president again and again, up through the conference of 1885, and then yet once again in 1897. Winsor also headed up in the course of his career two of the largest libraries in America. At the Boston Public Library (BPL), he presided over what was for a time the largest library on the continent, the library that was at the same time the most accessible in the world. It was the preeminent public library. Then, when he left that library, he presided over the preeminent university library in the United States, at Harvard University, the oldest university in the United States. He was also a successful head of those two institutions, greatly increasing the usefulness of both.

Winsor was also a prominent historian. He edited two major multi-volume histories: *The Memorial History of Boston* (1880-1881) and the *Narrative and Critical History of America* (1886-1889). He chaired in 1884 the meeting that resulted in the formation of the American Historical Association; and in 1886 he was chosen that organization's president. In the 1890s he published other historical works that were based on his cartographical studies.

To his contemporaries Justin Winsor was probably seen as the most important American librarian of his era. That is not, however, how we see Winsor today. To us, his influence does not seem as great as Melvil Dewey's. We, instead, see Winsor is an iconic figure--the preeminent exemplar of the scholar-librarian, back when librarians not only read books but wrote them, back during the supposed golden age of librarianship, when men (I use "men" deliberately), men who could equally well have been "captains of industry," steered the destiny of libraries—and were esteemed (both they and their institutions) far and wide in American society.

In this paper I will use the example of Winsor to examine the criteria for professional leadership, both within an institution and within librarianship. I will argue that it is Winsor's understanding of libraries and his accomplishments as a librarian—at the Boston Public Library--along with his personality, that brought him to the fore of librarianship. And, I will point out the irony that what we most remember him for—his being a "scholar-librarian"—resulted from the possibilities for creative librarianship being diminished at Harvard in comparison with the BPL.

Before looking at Winsor as a librarian, it is necessary to give some idea of his early life. He early showed an interest in the two fields in which he would later excel. While still a student in high school, he wrote and published a history of the town of Duxbury. When he went to Harvard, he lived in the same boarding house as Harvard's librarian, John Langdon Sibley, who had also written a town history. Sibley gave the young Winsor unusual library privileges. He permitted him to enter the alcoves, which meant, in effect, being able to go into the stacks (to use modern terminology), when no one else could, certainly not other undergraduates. Perhaps Sibley also shaped Winsor's interests, for it is recorded that Winsor read Antonio Panizzi's testimony about the British Museum library in a Parliamentary blue book. Even allowing for the fact that interest in libraries was then widespread (a Nicholson Baker was not needed to get some press for libraries), it cannot have been common for Harvard undergraduates to read about libraries.

Winsor's turn to library work was not, however, a direct result of conversation, reading, and library use during his undergraduate years. To become a librarian was not the dream of this son of a well-off merchant shipper of Boston. In fact, Winsor did not finish his education at Harvard. He left in his senior year (his departure was not entirely voluntary) in order to study in Europe the languages and literatures of France and Germany. Upon returning home, he sought to have a literary career, writing essays, poetry, and literary criticism, though without particular success, certainly without acquiring fame. By chance, his name having been suggested by a friend, in 1866, he was asked to serve on the Board of Trustees of the Boston Public Library. He made such a positive impression that the following year, 1867, he was appointed head of the Examining Committee. This body was a carryover from the tradition in libraries of having an "examining committee" that actually examined the collection annually in order to determine whether the books were all accounted for. But, at the BPL the Examining Committee was expected to report on the operations of the library. Winsor produced a most unusual report. It filled 53 pages of the annual report of the Trustees, so that in length alone it was impressive. The report also showed an extraordinarily detailed knowledge of the library, and at the same time it was a masterpiece of clear and logical exposition.

Winsor used the technique of asking a series of questions. Thus, under "Building," he asked: What are its main defects? and What is the remedy? Under books, he asked such questions as: Does the record of donations show on the part of the public a sustained interest in the library? Is a due amount of current literature purchased? Under catalogues: Are they well devised, in good order, and well kept up? Under Administration: Is the library conducted so as to be as useful as possible to all classes? Is the library open as much as possible? Under Circulation: Is the circulation satisfactory? What is the character of reading in the Bates Hall? (the non-circulating collection) with the same question being asked of the Lower Hall, where the circulating collection was borrowed. Can anything more be done to guard the books from mutilation and loss? There were more questions, but to list these alone is to show that Winsor raised the important ones for that era. Then, in his answers he explicitly stated the concerns that the report's readers might have; he appeared to hold nothing back; and he supported his arguments with statistics and information on practices of both the BPL and other libraries, including ones abroad.

The following year, 1868, Charles Coffin Jewett, the Superintendent of the Boston Public Library, had a stroke and died. Winsor was asked to become "superintendent," the title used for the director of the library. He was obviously the logical choice. Not only well read in several languages, he had also demonstrated that he understood the institution and its purposes. Thus, through a series of chances, the thirty-seven year old Winsor came to occupy what was arguably the most important position in American librarianship.

That Winsor became a librarian as a second career was not unusual for that time. Samuel Swett Green of the Worcester Public Library most closely paralleled Winsor's path, in that he, too, became head librarian, at the age of 34, after first becoming a trustee and the author of a report on the library. K. August Linderfelt (age 33, Milwaukee Public Library), Josephus N. Larned (age 41, Buffalo), Henry M. Utley (age 49, Detroit), John Cotton Dana (age 33, Denver), and William H. Brett (age 38, Cleveland), Henry James Carr (age 37, Grand Rapids)--all also ALA presidents—pursued other careers before becoming librarians. Ainsworth Rand Spofford became Assistant Librarian of Congress at the age of 36, after having been a bookseller and newspaper reporter. Henry Augustus Homes accepted a position at the New York State Library at the age of 42.

Contemporaries well realized that second-career librarianship was common, and there was a stereotype that such people had earlier been failures—presumably, were also failures in librarianship. Winsor himself succumbed to the stereotype: "Let me say that the day is passed when librarianships should be filled with teachers who have failed in discipline, or with clergymen whose only merit is that bronchitis was a demerit in their original calling. The place wants pluck, energy, and a will to find and make a way." Obviously, Winsor was not unusual in being a second-career librarian, and he likewise was not unusual in being one who "found and made a way."

There were, however, individuals whose entire working lives, or nearly so, were spent in librarianship. William Frederick Poole, Charles Ammi Cutter, William Isaac Fletcher, Herbert Putnam, William Coolidge Lane, and, of course, Melville Dewey. Frederick M. Crunden might also be counted among that number since he became a librarian before the age of thirty. All of these men were also president of the ALA.

Although Winsor held what may perhaps have been the most important post in American librarianship, why should he have been ALA president for the long span of years from 1876 to 1885? First of all, he was librarian of a public library in 1876. (The move over to Harvard was in 1877.) The importance of being a public librarian can be statistically demonstrated—even though the 1876 Report on U.S. libraries showed twice as many membership libraries as public libraries (723 as opposed to 342), and even though the initial supporters of a meeting of librarians had not been primarily public librarians. The Boston Athenaeum, The New York Society Library, the New York Mercantile Library, the Apprentices' Library of New York, the Brooklyn Mercantile Library, the Philadelphia Library Company, the Philadelphia Mercantile Library, the Providence Athenaeum, and the St. Louis Mercantile Library—these were among the largest libraries in the country, and librarians of those nine institutions were nearly one third of the twenty-eight individuals who signed the call for a library conference in 1876; and that percentage would increase if one were to include the Astor Library. Yet, only one of the librarians of those institutions ever occupied the post of ALA president. Charles Ammi Cutter was a special case because of his pioneering work in cataloging and as well because of the wealth and collections of the Boston Athenaeum.

It should also be noted that Cutter had spent his life in library work. So had the only other non-public librarians to become president of the ALA in its early years. If one excludes

Melvil Dewey, the college or university librarians who became president were William Isaac Fletcher of Amherst and William Coolidge Lane of Harvard. They were closely identified with librarianship. They were not academic librarians who had moved over to library work from the professoriat, and they were active in library affairs. Fletcher had served the ALA in various ways and just the year before his election had started a program for instruction in librarianship at Amherst. Lane was also active in the ALA, was a lecturer at the library school at Columbia and later at Albany, and he was also president of the Massachusetts Library Club. In other words, the selection of ALA presidents showed that public librarians were dominant.

Winsor was not just a public librarian; he was librarian of the public library, and what a public library it was!. At 299,869 volumes, the BPL was recorded as being only a hair smaller than the Library of Congress, at 300,000. Moreover, Winsor's Boston Public Library was nearly twice as large as the next largest libraries, the Harvard University Library, and the New York Mercantile Library. Its circulation was recorded as being 758,493 volumes per year, the next largest being the Chicago Public Library, at 403,356.

Winsor's long tenure as president of the ALA must also have something to do with the fact that he looked and acted the part. He had a neatly trimmed beard, and behind it was a man possessed, seemingly, of complete self-confidence, so much so that he was able to pass around credit to others. In, for example, his 1877 report as Superintendent of the Boston Public Library, he mentions a number of staff; he refers twice in friendly terms to Dewey; he acknowledges imitating Poole; and he acknowledges that the janitor leads in seniority on the staff. He also publicly supported staff as a body. This is from that 1877 report: "The skilled workers of the Library, though their labors require a breadth of knowledge and an acumen of the critical faculties . . . are . . . recompensed with salaries, which leave many of them to eke out a support by labors that impair their energies for the morrow's work. If the tax-payers of the city demand this sacrifice, the struggle must go on, and the harness must gall while the goal is reached. There is too much ambition to maintain the good name of the Library to allow any spirit of indifference to abate the labors imposed."

Winsor had also accomplished so much as head of the BPL. He was immensely successful at the three tasks that lay at the heart of librarianship: building collections, making them accessible through catalogs, and getting them used. Winsor clearly did not consider the first a difficult task; for, as he said in the section "Library Memoranda" in the 1876 Report, "The librarian of a great library largely escapes that choosing between books necessarily imposed on those in charge of smaller collections." The BPL had long used European agents and Winsor gave them considerable latitude to select on their own, in part with the goal of speeding up receipt of material. As for American books, trade publications were apparently all supplied to the library so that it was possible to review them. Winsor did face decisions regarding ephemera and government documents, and he thought through the issues. He strongly urged collecting ephemera, arguing that "there is little that a hundred years will not enhance in value." In this, he was definitely a man of his time, for it is possible to find statement after statement from librarians urging that everything printed be preserved. To collect government documents he urged that a few great libraries in various regions institute a system of exchanges and that the states pass legislation requiring local communities to deposit copies of documents to the state libraries and to one other large library in their region. The actual selection of trade publications may well have been carried out largely by agents, for he seems to have instituted this practice at Harvard in order that books would arrive and be available as soon as possible after publication.

Selection was not problematic, but how to handle material after receipt was. Winsor the organizer set up processes so that the library could process some 20,000 volumes a year, as opposed to five to six thousand, and with fuller records more promptly available to the public. Winsor was not a Charles Ammi Cutter or a Melvil Dewey; he did not innovate in classifying; but he did so in another way—one aimed specifically to increase the circulation of books, particularly of non-fiction. That was, of course, a primary goal of librarians. In that era of printed book catalogs which were used by the public, Winsor added notes on content to the catalog for History, Biography, and Travel in the circulating part of the collection. The resulting catalog was highly praised, and Winsor's notes were often incorporated into the catalogs of other libraries. In Quincy, Massachusetts, under the editorial direction of Charles Francis Adams, Jr., a similar catalog was prepared. Winsor claimed that the catalog worked, in that it increased circulation of those materials.

Winsor would have gained the respect of other librarians because he had no reluctance to get into the details. For instance, how should pamphlets be handled? What kinds of bindings should be put on material? Should covers of periodicals be bound in? To Winsor such questions were so important that he wrote:: "It cannot be too strongly impressed upon a librarian's notice that he should acquire something of an expert's knowledge of the binder's art."

So were buildings important to Winsor, and he wrote about them in reports and in the 1876 Department of Education Report.

In the third major area of librarianship, getting the books used, Winsor turned his attention to matters other than the catalogs. His goal was to circulate as many books as possible, in other words, to make the library as broadly useful as possible, and to do that required his attention to everything from the amount and type of fiction to buy, to the systems for recording which books were out, to policies on registering new library users, to keeping statistics, to making books accessible to the public, physically and intellectually.

He did not claim to have originated branch libraries and what he called "deliveries," or what a later generation would call "delivery stations," but he advocated for them and eagerly employed them to increase the circulation of books. He shortened the time the public had to wait for books to be delivered. He declined to require the public to periodically register again. That was the course that many libraries took. Not Winsor; he did not want registration to become a barrier to use, so he devised a system that enabled him to have a "dead" file and a "quick" file. And, he kept statistics, statistics, statistics.

The statistics were crucial to Winsor, in that they gave him the data that he could then analyze. To understand Winsor's role it seems necessary to keep in mind that this was what might be called the "heroic period of librarianship," by which I mean that it was the period in which "best practice" was being established. This was especially so at the Boston Public Library, for no institution had faced the task of running both a research library, to use the modern term, and a circulating or popular library. Moreover, the task was made more daunting by the size of the collection and of the population served. Winsor was keenly aware that the practices employed at the BPL might not be appropriate for other libraries, and he stated this explicitly. It seems that he was generous of his time when other librarians came to visit to see for themselves the practices of the BPL, and he clearly had a major hand in Free Public Libraries; Suggestions on Their Foundation and Administration (Boston: Published by the American Social Science Association, 1871), the first edition of which was so rapidly sold out that a second was produced Note the word "suggestions" in the title. This was not a "guide" a "handbook," or a "manual." It was suggestions. At the same time that that approach would have made him the ideal person to keep a new organization, namely the American Library Association, from splintering, it has perhaps undercut Winsor's long term influence. It may be that there were two major approaches to librarianship at that time. One was to systematize, the other to think through each case based on the institution and the populace it served. Winsor was definitely the latter.

Just as he saw each library as constituting a system whose parts had to work together harmoniously, so did he see the library world as a community whose members might be induced to cooperate. This could be on the local level, as in calling upon libraries in a locale to share responsibility for collection coverage. Or, it could be on a wider level, for Winsor hoped that libraries would cooperate to produce bibliographies and indexes.

When Winsor moved across the river to Harvard, he continued the major emphases of his years at the BPL. Just as earlier, he above all pursued the goal of making libraries as useful as possible. In his second annual report, he wrote: "There should be no bar to the use of books but the rights of others." His long attention to buildings evinced itself in his first report, as he wrote about plans for a new building. There are hints that he hoped to be part of an effort to produce a universal catalog. He sought more funds for publications.

Basically, he had a dream, which he expressed in his first annual report (1878): "I have at all times aimed to enlarge the Library's importance in the eyes of our academic community. I wish to see it become, not merely in complimentary phrase, the centre of the University system, but, in actual working, indispensable and attractive to all." It is not clear what he meant by this, but perhaps a clue is offered by his comments on a presentation at the International Conference of Librarians, held in London in October, 1877: "I hope to see All Souls' and Bodley join forces to become an exemplar for the world. There is no calculating the good capable of coming from a body of educated fellows of an Oxford college devoting themselves to the science of library management. It is a fortuitous and fortunate combination of forces such as the world has never seen, and from its consummation I think we may safely date a new departure and an elevating outcome." And that, too, is not clear.

What does seem clear, even if not provable, is that Winsor was ultimately disappointed at Harvard. He was able to start a publications program, and he did succeed in increasing use by undergraduates. Yet, a policy change such as admitting students to the stacks took a long time. It was first mentioned as a desideratum in 1878, but not written about as accomplished until 1880, and then referred to as having been carried out on a "limited" basis. His attempts at centralizing and unifying the library ultimately failed. His dream of a new building came to nought.

I do not know why, in my opinion, he was unable to accomplish what he hoped to. Was the absence of an adequate library building crucial? Did President Charles William Eliot not support Winsor? Were the faculty unsupportive? There was then a library committee of the faculty.

That the Harvard library could not engage his talents in the way that the BPL did is, I think, why we have Winsor the "scholar." As noted at the beginning, his scholarship—much of it, incidentally, being cooperative—was carried out in the 1880s and 1890s.

It has been suggested that Winsor planned it that way, that the move to Harvard was to free him up to pursue scholarly interests. I do not, however, find signs of that in his first report. I think that, instead, Winsor adapted himself, but that we in his doing so basically lost Winsor the scholarly librarian, and got something less, the scholar-librarian.

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"Dewey In Boston: 1876-1883"

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Abstract:

Between 1876 and 1883, Melvil Dewey worked as a Boston entrepreneur promoting a variety of educational schemes that addressed the nation's library, metric, and spelling reform interests. During that time he started and lost one business, and started another within weeks. In addition, he used his reform zeal to develop credibility with a number of associations he helped organize, then lost that credibility, only to begin to rebuild it all over again. Throughout he retained his boundless energy, intense commitment, self-righteous arrogance, and irrepressible reform spirit. He made many friends, and many enemies. Most who came in contact with him, however--whether superior, peer, or subordinate--quickly recognized him as a forceful personality not easily swayed from goals he had set when he arrived in Boston on April 10, 1876.

On April 10, 1876, Melvil Dewey, a young entrepreneur with a passion for popular education, stepped off the train in Boston to begin what he called his "life's work." For two years previous he had been Associate Librarian of Amherst College, where he created his Decimal Classification. In Boston, however, he had his sights set on bigger things.[i]

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[i] Much of the information contained in this paper is taken from my Irrepressible Reformer: A

By May 5 he had negotiated an agreement with Ginn and Company, an educational publishing firm with a manufacturing department that also produced educational materials. In return for $2,000, Dewey agreed to set up an all-purpose office with interests in spelling reform, adoption of the metric system of weights and measures, and free public libraries. Dewey promised Ginn 10 percent of the profits specific to sales of the bureau metric materials, and agreed to cover advertising, manufacturing costs, and office rental at 13 Tremont Place.[ii]

Not much money for such big plans, but Dewey was undeterred. Since he had little money or collateral himself, he set up a system of business connections whose financial interests he interlinked through a series of "bureaus" he was creating. For example, he arranged for Ginn to publish J.P. Putnam's "Metric School Chart" and negotiated agreements with the G. M. Eddy Tape and the Fairbanks Scales companies to supply him with metric measuring devices. All the companies believed they were working with Ginn; none were aware they were actually making arrangements with a separate "bureau" using Ginn's sales network to market its products.[iii]

At the same time, however, Dewey worked on library interests. In April he discussed his plans for a library journal with Boston Athenaeum Director Charles Cutter, and in their conversation found out Cutter had written U.S. Commissioner of Education John Eaton about Dewey's new decimal classification. Cutter knew Eaton was planning a major report on U.S. public libraries as part of the nation's 1876 centennial celebration, and because Dewey's scheme was "one of the most important contributions to library economy that has been made for many years," Cutter told Eaton, the report "would be very incomplete without some account of it." Several days later the Bureau asked Dewey for "a list of my library sistem." Before replying, however, Dewey pushed Cutter on the subject of a library journal. Together they agreed to "try for a place for the journal in the library volume." Dewey then wrote Eaton directly, asking for "simpathy in the library project."[iv]

On May 16 Dewey left for New York on the overnight boat from Boston for an American Metrological Society (AMS) meeting. He arrived at 7:00 a.m., and since he was not obligated until that afternoon decided to visit Publishers Weekly (PW). There he found editor Frederick Leypoldt and Associate Editor Richard R. Bowker. His intentions were clear. He wanted to alert PW to his plans for a journal, and for a bureau that would market library supplies. Leypoldt

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Biography of Melvil Dewey (Chicago: American Library Association, 1996).

[ii] Dewey Diary, April 20, 1876; May 2, 1876, Melvil Dewey Papers, Rare Books and Manuscripts Reading Room, Butler Library, Columbia University, New York, New York (hereafter cited as Dewey Mss.)

[iii] Dewey Diary, April 25, 1876; April 27, 1876, Dewey Mss. A copy of the contract between Ginn and Putnam can be found in Box 68, Dewey Mss.

[iv] Dewey Diary, April 18, 1876; April 19, 1876; April 20, 1876; April 21, 1876; April 22, 1876; April 27, 1876 (quoting April 20, 1876, letter from Cutter to Bureau of Education); April 28, 1876; and April 29, 1876, Dewey Mss. Dewey used various forms of simplified spelling his entire adult life. I quote them here without use of "[sic]."

said he was especially interested in the former, but also told him about a forthcoming PW editorial suggesting librarians meet in Philadelphia during the nation's centennial. Dewey loved the idea, and together the three men quickly drafted a "preliminary call" for a conference of librarians on August 15. Leypoldt forwarded copies to several Boston librarians.[v]

At 4:00 p.m. Dewey went to Columbia College to attend the AMS meeting, and was promptly elected to its Council. While there, he described his arrangements with Ginn to market metric devices through an American Metric Bureau (AMB). When Dewey returned to PW offices the next morning, Leypoldt said he was not interested in a "bureau" of library supplies, but wanted to own and distribute a library journal from New York. He then asked Dewey to become its Managing Editor, and run it from Boston. Except for rent, Leypoldt said, he would cover all Dewey's office expenses incurred for the journal and pay Dewey $500 a year for his work, plus 20 percent of the journal's gross receipts. Dewey quickly accepted.[vi]

An active May and June were only prelude to an even more hectic July and August, when Dewey's specific plans for his education reform interests took shape. By that time he had determined to establish "bureaus" for the manufacture and sale of library, metric and spelling reform supplies (he helped organize the Spelling Reform Association [SRA] in August), and to manage all these interests from his Boston office. To fund them he linked the accounts for each into a single set of books, thus allowing him to extend his limited financial base by shifting funds from one account to another as he deemed necessary. Most business contemporaries would have judged Dewey's methods irresponsible, but to an irrepressible reformer shunning personal gain and intensely committed to education of the masses, their use seemed warranted. For Dewey, the ends justified the means. And to gain those ends Dewey worked long hours, lived very frugally, and rolled back into his ventures almost all the money he earned.

The prospectus for a library journal that Dewey drafted for the Bureau of Education is illuminating for what Dewey hoped to accomplish as its Managing Editor. "The science of library management, and particularly that part of it which relates to the elevation of the tastes of readers, is yet but in its infancy," he said. The journal would accelerate the growth of that science in special ways. First, the journal would become a "medium of communication" so librarians could learn from each other's experiences. Second, emphasis would be not so much on identifying quality books as on methods for getting those books read. Third, the journal would also facilitate "early completion" of a new edition of Poole's Index to Periodical Literature (compiled by W. F. Poole as a Yale student in the 1840s) and effect "a national organization" dedicated to "bringing the libraries into intimate relations." Finally, Dewey forecast a library "bureau" that would "serve as a guide in selecting the best forms of the various library supplies." The "bureau" would also explore printing titles of new books "in such a way that they can be usd for the catalogues of all libraries." Although these could be distributed to subscribing libraries at "slight expense," they would inevitably lead to "an immense saving of time" because each title would be cataloged only once. In effect, Dewey had turned a prospectus for a library journal into an outline for a library association and a library bureau, all three of which he believed would facilitate the development of uniform systems and increase efficiency.[vii]

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[v] Dewey Diary, May 11, 1876; May 12, 1876; May 13, 1876; and May 16, 1876, Dewey Mss.

[vi] Dewey Diary, May 17, 1876; May 18, 1876, Dewey Mss. A copy of the contract Leypoldt proposed to Dewey, dated May 18, 1876, can be found in Box 64, Dewey Mss.

At 10:15 a.m. on October 4, Boston Public Library Director Justin Winsor called the librarians' conference to order at the Historical Society of Pennsylvania. Before the end of the conference a committee on permanent organization reported a preamble to a still unwritten constitution. "For the purpose of promoting the library interests of the country, and of increasing reciprocity of intelligence and goodwill among librarians and all interested in library economy and bibliographic studies," the preamble stated, "the undersigned form themselves into a body to be known as the AMERICAN LIBRARY ASSOCIATION." Dewey signed first.

At 25 Dewey was different from other ALA leaders. While he certainly shared their belief in the power of reading and the educational mission of the library, he was convinced the best way to maximize the library's potential was to create relatively uniform collections of quality materials and increase service efficiency by standardizing internal library procedures with common forms, appliances, and rules and systems of arrangement. Throughout the conference Dewey was the only prominent participant to focus on small public libraries which, he realized, stood to gain most from standardization and systematization. Small public libraries, he believed, had the greatest potential to meet the educational needs of "children of the lower classes" beyond the elementary school.

By October, Dewey had moved his offices to more spacious quarters at 1 Tremont Place, where he continued to make every effort to tie together all his reform interests. There he not only served as AMB Manager, but also as SRA Secretary and editor of its publications and as ALA Secretary-Treasurer and LJ Managing Editor. To AMB members he later wrote: "Every practical labor or money-saving device has been employed to make the most of our limited efforts and means." Office equipment, he said, included duplicating machines, an electric pen, and a typewriter. Office material included forty-five different circulars, thirty bulletins, and hundreds of preprinted postcards used to respond to common inquiries. Dewey did not mention that this equipment was also being used for ALA and SRA, and for both their journals.[viii]

Although Dewey continued his duties as LJ Managing Editor, things were not going well; LJ lost $1,100 its first year of operation. By late 1878 Bowker decided to cut expenses by moving LJ's business management to New York. Dewey reacted sharply. On January 8, 1879, he threatened to start an "opposition journal" with the help of "leading men of ALA" from Boston unless Journal publishers gave him a more favorable contract. Bowker bristled. LJ could not continue to duplicate expenses at Dewey's Boston office for services which could just as easily be covered at Bowker's New York office, he said, and if Dewey persisted, he would show Cutter and Winsor Dewey's January 8 letter. Bowker realized Dewey was using his ties with ALA to press LJ into keeping its business management in Boston. What he did not realize, however, was how closely Dewey had tied all of his reform interests to his Boston office, how tenuously the whole structure balanced on money Dewey had interlinked into a single account, and how threatened that structure became when any one component was removed.[ix]

[vii] Dewey's undated draft of a prospectus for a library journal is in Box 29, Dewey Mss.

[viii] Proceedings, American Metric Bureau, Vol. I (1877), p. 71. See also Dewey circular to AMB membership, November 15, 1877; and circular entitled "Our First Thousand Days," March 27, 1879, Box 66, Dewey Mss.

The incident demonstrates a set of circumstances that for years had a significant impact on ALA. Since October, 1876, Dewey had served as the link between ALA and LJ. On the one hand, he used LJ columns as a way to keep his ideas of an expanded library cooperation and efficiency that would benefit from a library bureau before the eyes of the nation's library community. He also used its advertising sections to market AMB and SRA products, but instead of paying for that space he "traded" it with advertising space in the Metric and SRA Bulletins. No money exchanged hands; the value of the trades occurred entirely in the columns of Dewey's account books. That spelling reformers and metric reform advocates might not be the most promising market for LJ subscriptions did not seem to bother Dewey; in his mind all these activities were part of a large game plan he ran from his "bureaus" in Boston. And since he was not after material gain, he could not fathom how some people might consider his motives suspect. Still, Dewey had no reservations about harnessing his ALA ties to evoke a better deal with LJ, and using that money to support the empire he was trying to piece together in Boston.[x]

In March, 1879, Dewey decided to reorganize his interests and coordinate all of his bureaus into a new organization--the Readers and Writers Economy Company. Dewey served as manager of the company and owned $10,000 of the $25,000 worth of stock. An agreement he drafted with fellow investor Frederick Jackson called upon both parties to "loan" all dividends and salary back to the company at 8 percent interest, and specified that all receipts from the ALA, AMB, SRA, and LJ "be shared equally with Jackson by direct payment" into the RWEC treasury. Jackson was guaranteed a salary of at least $1,500 per year as treasurer, and Dewey agreed to take no more "than $3,500 per year including all commissions on subscriptions and advertising for the Library Journal."[xi] So far as is known, neither Dewey nor Jackson ever informed other affected parties about these arrangements.

Business grew rapidly. By May Dewey had moved to larger quarters at 32 Hawley Street and by June had removed partitions between rooms 6, 7, and 8 to create one big Economy Company office to accommodate all his reform interests. December 10, 1879, was a significant day. On his 28th birthday he officially changed the spelling of his name to "Dui" and incorporated SRA in Connecticut and ALA in Massachusetts. He also incorporated the RWEC as a joint stock company, assumed the position of president, and capitalized it at $100,000 by dividing 4,000 shares at $25 each. Dui claimed RWEC as sole manufacturers of four hundred "improved devices for desk, study, and library" designed "to save time, money and labor."[xii]

[ix] Bowker to Dewey, January 9, 1879, R.R. Bowker Papers, Special Collections, New York Public Library, New York, New York (hereafter cited as Bowker Mss.). See also Bowker to Cutter, January 13, 1879; and Bowker to Winsor, January 15, 1879, Bowker Mss.

[x] See, for example, Bowker to Winsor, June 16, 1879, Justin Winsor Letters bound into 1881 volume of Library Journal, Dominican University Library, River Forest, Illinois; and Leypoldt to Bowker, July 1, 1879, Bowker Mss.

[xi] "Readers and Writers Economy Co.," R.G. Dun and Co. Collection, Special Collections Department, Baker Library, Graduate School of Business Administration, Soldiers Field, Harvard University, Boston, Massachusetts (hereafter cited as Dun Collection), MA 80/p. 358. Dewey's contract with Jackson, dated May 8, 1879; and "Agreement Made at Boston," May 8, 1879, in Box 81, Dewey Mss..

His relationship with LJ, however, continued to deteriorate. In June, 1880, Bowker got Leypoldt to agree to suspend publication of LJ and consolidate it with PW. When Leypoldt made the announcement, however, the library community deluged him with protests and forced him to recant. Bowker was angry and suspected Dui had been instrumental in the campaign. Not so, Leypoldt wrote. "Dui had no hand in this." Leypoldt's wife was less charitable. "I never believed in the Library Journal, because I knew it would not pay and I thought Dewey about as miserable a specimen of a gabbling idiot as I had ever beheld."[xiii]

On October 11, 1880, however, Dui's problems increased. That day several RWEC stockholders who had been scrutinizing Company books visited a local judge to ask for an injunction against Dui. In their complaint they noted Dui credited himself for 2,684 shares of RWEC stock but did not have the capital to back it up. They told the judge they were forced to ask for an injunction because Dui's majority control would allow him to block any move against his control of the corporation, and they needed an independent audit to figure out RWEC books. Until that audit was complete, they argued, Dui ought to be denied access to RWEC accounts and prevented from incurring any debts. The judge agreed, and granted the injunction. That afternoon, at a regularly scheduled RWEC directors meeting, stockholders surprised Dui by serving him with the injunction. Dui was caught off guard, and insulted at finding his motives were considered suspect. He felt no choice to but resign as president and director of RWEC, both of which were unanimously accepted. At the same time RWEC trustees directed their lawyer to open any mail addressed to Dui that came "through our box." They knew orders and correspondence concerning Economy Company products were just as likely to be addressed to Dui personally or to Dui as secretary of the ALA, AMB, or SRA.[xiv]

Reaction from members of the associations and organizations whose treasuries were now frozen because Dewey had consolidated them all into RWEC accounts was understandably negative. For example, Frederick Leypoldt responded to the news by writing Dewey that "your peculiar way of doing business has cost this office more in time than all that you claim could amount to." At the end of the contract year, he said, Dui would be dropped as LJ editor. ALA moved just as quickly. When Dui did not appear at an ALA Executive Board meeting December 5, the Board accepted a resignation he had not tendered and empowered another officer to take control of ALA funds and books Dui protested, but to no avail. "We argue to no purpose," ALA President Winsor replied.[xv]

[xii] For listing of RWEC products, see RWEC letterhead stationery, Box 63, Dewey Mss.

[xiii] Library Journal 5 (July-August, 1880); 207-8; (September-November, 1880): 248-49; Leypoldt to Bowker, August 11, 1880; and August Leypoldt to Bowker, September 18, 1880, Bowker Mss.

[xiv] The "complaint" of the committee, the injunction of the judge, and the minutes of the October 11, 1880, RWEC meeting are in Box 61, Dewey Mss.

The arbitration process was contentious, but Dui finally settled with the RWEC on January 10, 1881. For his part Dui agreed to clear all claims against RWEC from the business associates and professional organizations he represented. For its part the RWEC agreed to return all personal property to Dui and "the three societies in Dui's charge," to transfer "all its rights & title to any good will, patronage, or influence" of the SRA, AMB, and ALA "or the supply departments pertaining to each," and to sell Dui at cost any articles owned by RWEC connected with these organizations and departments. The settlement showed no clear winners or losers. The RWEC's major goal was to rid the company of Dui and "his clogging business complications." Dui realized assets totaling $19,000, but he received nothing for the business nor any compensation for the work he had put into it.[xvi]

Dui lost no time in founding a new business. He used most of the cash realized from the settlement to pay debts to the ALA, SRA, and AMB treasury and to creditors with claims against him as RWEC president, and with money realized from paid-up stock that he pledged as security, he was back in business at 32 Hawley Street. It was from that address he sent out a four-page circular on March 20 announcing his new arrangement. On page four he informed readers of the significant personal sacrifice he was making on behalf of each of these societies, and he called upon members of each to increase orders to his supply departments. "All Metric articles will be sold as before under the name METRIC BUREAU." The "Library Supplies Department," on the other hand, "will go under the name LIBRARY BUREAU." He told readers he had secured four regular and three special assistants, and invited everyone to visit him at his "old offices."[xvii] For the next two years Dui devoted himself to the Library Bureau. R.G. Dun & Company, which compiled credit reports on American businesses between the 1840s and 1880s, described Dui in 1881 as "a sanguine well-meaning man, full of little schemes for economizing the time and labor of librarians & literary men" who had "no capacity for bus. affairs and no means worth mentioning."

Despite a lack of capital, however, Dui persisted. On May 31, 1881, he incorporated the "Library and Metric Bureau" in the State of Massachusetts and continued to promote his educational reform schemes. In 1882, for example, Wellesley hired him as a Library Bureau consultant to reclassify its collections. Dui used the opportunity to expand his original decimal scheme, and he trained several Wellesley Class of 1883 members to implement the changes. By the time he had completed his consultation, he had already determined the substantive changes and new headings for a second edition.[xviii]

[xv] Leypoldt to Dui, October 4, 1880; October 7, 1880, Box 1; Dui to Winsor, December 13, 1880; Winsor to Dui, December 14, 1880; December 20, 1880; December 23, 1880; December 31, 1880; January 14, 1881; and January 25, 1881, Box 7, Dewey Mss.

[xvi] Copy of the agreement in Box 61, Dewey Mss. Dui details the financial ramifications of his settlement in Dui to Bowker, June 6, 1881, Bowker Mss.

[xvii] Dui's March 20, 1881 circular in Box P-36, Dewey Mss.

For Melvil Dui, the years in Boston between 1876 and 1883 had been highly productive and highly tumultuous; they were also gratifying and painful. He started and lost one business, and started another like it within weeks. He used his reform zeal to develop credibility with a number of associations he helped organize, then lost that credibility, then began to rebuild it all over again. Throughout he retained his boundless energy, intense commitment, self-righteous arrogance, and irrepressible reform spirit. He made many friends, and many enemies. Most who came in contact with him, however--whether superior, peer, or subordinate--quickly recognized him as a forceful personality not easily swayed from goals he had when he stepped off that train in Boston on April 10, 1876.

But in 1883 Dui was also "open to some engagement where I think I can do good work." On May 7 he found it. On that day he decided to return to his home state of New York by accepting an offer to become Chief Librarian of Columbia College. He saw it as a good opportunity to develop, implement, and ultimately demonstrate the value of most of the library reforms (and some of the metric and spelling reforms) he had been pushing for nearly ten years. And sometime that month, at the request of one of his new employers who was critical of "eccentricity" in "the spelling of his name," he officially changed it back to "Dewey."[xix]

[xviii] See "Library Bureau," MA 88/p. 184, Dun Collection. See John Comaromi, The Eighteen Editions of the Dewey Decimal Classification (Albany, NY: Forest Press, 1976), Chap. 3, for more information on the development of the second edition of the decimal scheme.

[xix] F. Augustus Schermerhorn (Columbia College Trustee) to F.A.P. Barnard (Columbia College President), April 14, 1883; Barnard to Dui, April 15, 1883, Box 18, Dewey Mss.

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"Referred to the Librarian, With Power to Act": Herbert Putnam and the Boston Public Library

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Abstract:

Herbert Putnam was Librarian of the Boston Public Library between February 1895 and April 1899, the first experienced librarian to hold that post since Charles Coffin Jewett (1855-68). This paper reviews the circumstances surrounding his appointment and discusses his accomplishments, including expansion of the library system, services for scholars, services to the schools, the addition of new departments, and a new staff classification and promotion system. The physical problems of the Library's new building and the resulting renovation are also addressed.

Most people think of Herbert Putnam only as the Librarian of Congress (April 1899-July 1939). His early career, however, encompassed libraries and the law. Between 1884 and 1891 he was in Minneapolis, Minnesota--first as librarian of the Athenaeum, an endowed private subscription library, and then as director of the city's new Public Library, to which the Athenaeum was joined. From 1892 to 1895 he practiced law in Boston. Early in 1895, just as the Boston Public Library moved into its new building on Copley Square, its Board of Trustees invited him to become Librarian.

As the sixth son of George Palmer Putnam, Herbert Putnam was only eleven when three of his elder brothers took over the Putnam publishing house, and his career lay elsewhere. He graduated from Harvard in 1883 and attended law school at Columbia, but soon became intrigued with library administration. From the beginning of his library career he never held any post in a library other than that of director, and he made every important decision (and most of the less important ones as well) at every institution he served. He planned the Minneapolis Public Library building, hired its first staff, established its first branch libraries, and instituted its work with teachers and schools. Also in Minneapolis, he installed modern systems of charging books and of cataloging and classifying, and most important, he placed collections of books on open shelves where readers could readily use them.[1]

As a novice, Putnam seems to have modeled his policies at least partly on Justin Winsor's administration of the Boston Public Library. But it is important to take note of his work in Minneapolis because it prepared him so well for the later posts in Boston and Washington, D.C.[2] His Boston administration was patterned on what he had accomplished in Minneapolis, and he applied his experience at both to the Library of Congress. But before appraising his work, let us survey the Boston situation as it was at the time that Putnam moved his family to that city to be near Mrs. Putnam's mother, who was seriously ill.

Walter Muir Whitehill, the historian of the Boston Public Library, declares that when Justin Winsor "crossed the Charles River to Cambridge in September 1877, the Boston Public Library wandered into a wilderness from which it did not emerge for eighteen years."[3] The trustees soon named a new Librarian: Judge Mellen Chamberlain, formerly of the Boston Municipal Court; but Chamberlain by his own account found the library "running itself" quite well as Winsor had left it. In fact, the trustees were the chief administrators of the institution during his tenure. When Chamberlain retired in 1890, the trustees at length appointed Theodore Frelinghuysen Dwight, but undercut his authority by designating a subordinate, Louis F. Gray, as clerk of the corporation. Dwight left the library after only eighteen months' service.[4]

The Boston trustees' opposition to professional expertise was particularly annoying to the rapidly growing library profession, and at a dinner given by Boston publishers and printers on September 19, 1890 for visiting members of the American Library Association, William Frederick Poole did not allow politeness to forestall criticism. As a specialist in library architecture and librarian of Chicago's Newberry Library, Poole complained at length in his after-dinner remarks about the impracticality of the plans for Boston's palatial new Florentine Renaissance building and about the fact that librarians had not been consulted about its design. His speech provoked a heated response by Samuel A. B. Abbott, president of the Board of Trustees, in the Boston newspapers while the editors of *Library Journal* and the *Nation* defended Poole.[5] The incident more than irked local pride; it publicized the small esteem of the profession for the second largest library in the nation. Two years later another prominent library leader, Charles Soule, published in the *Boston Herald* a series of letters scathingly accusing the Board of mismanagement, of ignoring the needs of the public and the schools, and of perpetuating "cultural exclusiveness" while disdaining modern library administration.[6] As a trustee of the Brookline, Massachusetts Public Library, Soule was well-informed, and his criticism was hard to rebut.

Putnam had arrived in Boston when the *Herald* published Soule's letters, and he was probably aware of the controversy. But he carried out his plan to practice law, refusing an 1893 invitation to become librarian of Brown University. With the new library building scheduled to open in February 1895, however, the library profession again tried to exercise its influence in Boston: Caleb B. Tillinghast, librarian of the Massachusetts State Library, wrote to Board member Josiah H. Benton, Jr., recommending thirty-three-year-old Herbert Putnam as the best possible candidate for librarian. Describing the young lawyer as "live, progressive and industrious" with "the energy and nerve that could ensure success," Tillinghast clearly thought that Putnam's appointment could restore Boston Public to leadership status in the library world.[7] Members of the library board in Minneapolis also wrote on his behalf; for example, University of Minnesota President Cyrus Northrop, and Samuel Hill, president of the Minneapolis Trust Company. Among other testimonials, they noted that Harvard President Charles Eliot had described Putnam as one of the three best librarians in the country. Coincidentally, with the new library completed, Abbott planned to retire from the Board, and three other members had recently resigned. By early February the Board had a majority of new members, and Abbott joined them to unanimously elect Putnam Librarian.[8]

When Herbert Putnam walked up the steps to take charge on February 11, 1895, a unique opportunity lay before him: the Boston Public Library, "the oldest of large American public libraries" now had the "first great municipal library building in the country." Its collection of over 600,000 volumes ranked second in number only to the Library of Congress, and in quality the Boston collection was arguably superior, since it boasted numerous gifts of not only rare and unusual material, but entire special collections. Putnam's task was to convince the Board to allow him to bring modern professional administration to the library. And with the supreme self-confidence that he habitually displayed, he moved quickly.[9] After three months, the trustees named him clerk of the Corporation, providing him the entrée to their meetings, and the Board's minutes soon began to include the phrase "referred to the Librarian, with power to act."[10] Within the year, the trustees publicly declared that the responsibility for meeting "the just wants of the public" must belong to the Librarian, and they codified that statement in their By-Laws.[11] The trustees still had to approve any changes Putnam wanted to make, and any titles he wanted to add; the Librarian had to submit weekly and monthly written reports, and each year the Board appointed an Examining Committee to evaluate the institution. But both the Board and successive Examining Committees clearly held the Librarian's recommendations in great esteem. As Putnam's contribution to the *Annual Report* became longer each year, the Board's and Examiners' reports just as punctually shrank.

A month after Putnam took charge, he installed a new system of graded service under which both appointments to the library staff and promotion from grade to grade would be achieved through examination. There were five grades, each with a minimum and maximum salary, and after reaching the highest salary within a grade employees could apply for promotion, which depended upon both examination and excellence of previous service. The system created as the Librarian observed "both hope and despondency " among the staff, since it favored the enterprising and the accomplished over the less educated and less energetic.[12] A series of new appointments followed, making it evident that Putnam would select his staff with care. Perhaps most interesting is the fact that women, whose appointment to major administrative posts was not necessarily accepted in the profession, filled important positions--for example, auditor, and the key posts of chief of the Ordering Department and chief of the Issue Department.[13]

With an expert staff, Putnam could set high standards for library service. Entirely characteristic of his ideas was an early request to readers to report their difficulties. For example, since the book delivery system proved deficient, he posted a notice asking users to wait fifteen minutes and then notify the staff of the delay. "Such a complaint will not be deemed an intrusive grievance, but a service," it read. Likewise, he asked the staff to keep careful records of unfilled requests and to tabulate the reasons for failure so that deficiencies could be remedied. Staff members were asked to assist users to the extent of their ability, but also to "see to it that every . . . person having complaint or grievance, whether just or unjust, or unable to get the material he desires in the ordinary course" be sent to the Librarian's office to discuss the matter privately with Putnam himself. Given these examples of courtesy, the spirit of what the 1895 Examining Committee called "gracious helpfulness" became a Boston Public Library norm.[14]

Among other events of that first year, Putnam opened "The Juvenile Room," probably the first room devoted to service for children in any of the large public libraries in this country,[15] and he had a *Selected List for Younger Readers* compiled as a common listing of the open shelf collections he had begun to purchase for the Central Library and all nine branch libraries. Cooperation with the schools, a persistent theme of his work in Minneapolis, soon appeared in Boston, encouraged by enhancing borrowing privileges for teachers, by locating library delivery stations in several public schools, by providing topical lists of books for students' research and general reading, by sending collections of reproductions of art works and photos to the branches, and by welcoming classes to the library.[16] Having also opened a new branch library, extended evening hours from nine to ten, and begun providing service on Sundays for the first time, Putnam accomplished a great deal during that first year. The Examining Committee expressed satisfaction with his administration in their year-end report, and in an editorial published April 6, 1896, the *Boston Herald* commented that the Librarian had not "lost himself in the routine work of library management," but had "risen to the conception of what the Public Library should be to the people of Boston."[17]

The ensuing years saw major development of the system of branch libraries begun by Justin Winsor.[18] To bring the branches closer to the Central Library, Putnam created in 1896 the position of Supervisor of Branches and Stations "to unify the outlying system, to strengthen the collection of books, to improve the equipment, and to introduce uniform and modern methods of administration."[19] The Supervisor scheduled regular meetings for branch personnel with the central library staff, attendance at library professional meetings, and inter-branch visits. Both the children's section and the open shelf system were introduced in the branches; new collections of reference books were purchased for them; topical collections of book were sent to them when teachers requested resources, all cataloging was moved to the Central Library for greater efficiency; and a reclassification of all branch collections to a common system began in 1898.

The smallest units of the system, delivery stations, were in 1895 "no more than a desk in a shop" whose proprietor received $250 per year for sending in requests for books to the central library and distributing them to requesters. But with a circulation of less than 5,000 volumes a year, the stations were not cost-effective. Putnam decided to reduce the unit cost by increasing circulation. He asked the proprietors each to set aside a separate room, in which a 300 to 500-volume collection, table and chairs were installed, and he promised in return compensation based on the number of volumes circulated per month.[20] As a result of this incentive system, circulation in deposit stations more than doubled, and new delivery wagons conspicuously labeled "Boston Public Library," which transported books among all the libraries daily, also periodically rotated the delivery station collections.

Convinced that the library got more out of the new arrangement because it was to the proprietor's advantage to make the space attractive, advertise the collection, and provide service, Putnam did admit one disadvantage: the users and consequently the proprietors constantly clamored for more fiction. With the proportion of fiction to nonfiction in library branches and stations maintained at a little more than three-fifths fiction, such demands conflicted with Putnam's objective of raising "the character of the reading by rendering locally accessible in these collections books of a serious nature which might be examined without formality and drawn without delay." The first superintendent of branches, Hiller Wellman, nevertheless advocated allowing some books without much literary merit, "as stepping-stones to better reading," and once admitted to a "systematic endeavor to avoid respectable dulness."[21] Wellman considered lowering the rate of compensation (which on February 1, 1898 was $12 for the first three hundred books and two cents for each additional volume) for circulating fiction, but for unstated reasons, found that solution impractical. Putnam's remedy was to provide more guidance for readers, and by 1899 five of the stations had become "reading rooms," each with a library employee in charge, and with enriched collections that included reference books and periodicals.[22]

Expanding the number of delivery stations each year greatly increased access to the library's resources, but Putnam and Wellman also added small groups, at first of 25 and later of 50 books, for rotating deposits in public buildings. By the end of Putnam's tenure the number of branches had increased by only one, but there were five reading rooms and thirteen delivery stations. Twenty-two fire stations received books regularly, as did one post office; four public schools, and five specialized schools. Readership expanded amazingly. On January 1, 1895, there were 29,871 card holders, but that number increased by the thousands annually until on February 1, 1899, there were 72,005--a 141 percent increase. Circulation had climbed from 279,494 volumes circulated from the central library to 422,849, while branch library book use rose from 567,827 to 822,993.[23] The deposit collection of 8,000 books, segmented to rotate constantly among 48 different locations, recorded more than 150,000 circulations in 1898.

An important weakness of the branches and deposit stations in 1895 was that nearly half the requests users sent to the Central Library were for books that the library did not own, partly because there was no printed list of library holdings.[24] In 1896 Putnam established the position of Editor of Library Publications and replaced the quarterly *Boston Public Library Bulletin,* which cost 25 cents, with a free *Monthly Bulletin* of current accessions and selected topical lists. He also began a selected *Annual List* of new books and issued subject bibliographies--all printed on the Library's new linotype machine, while a second machine, especially adapted by the manufacturer to print diacritical marks, produced printed catalog cards. The linotype also provided all the Library's stationery, call slips, signs, and other needed items, and linotype slugs were stored, for example, from the *Bulletin* so that they could be used later to print the *Annual List*. The adaptation of the linotype to catalog cards, a pioneering application, awakened such wide interest among librarians that the Boston Public Library printing operation was the subject of an exhibit at the 1898 International Conference of Librarians in London.[25]

Also in 1896, the Librarian began creating special services for scholars. An interlibrary loan service was established, and the Library advertised the availability of a public stenographer to search for and supply materials from the collections to researchers and institutions at a distance and a "photograph room" in which copies might be made of manuscripts, plates or other material. A union list of periodicals held by Boston libraries appeared in 1897.[26] Lectures and exhibitions began to be scheduled, held on the upper floor reserved for the specialized collections and departments and using their resources. By the end of 1898, drawing on his experience in organizing a Department of Periodicals and Public Documents in Minneapolis, and using as a core collection the recently donated library of the American Statistical Association, the Librarian had set up a new Department of Documents and Statistics with Worthington Chauncey Ford, the former Chief of the U. S. Treasury Department's Bureau of Statistics, in charge.

Putnam's greatest administrative difficulties were caused by the new building. The old library had accommodated up to 250 readers, but the new building could hold nearly 900, and the cost of coal more than tripled; cleaning costs went up 133 percent, and the engineering, janitorial and repair staff increased from four to sixteen, including a painter and a "marble polisher." Because the three main stack areas were not connected, processing call-slips required eight employees instead of three; and the Issue Department required 43 staff members where 20 had previously sufficed. The trustees had requested a $215,000 annual appropriation for the new library, but the city provided only $175,000. Thus some library departments were not opened until late in 1895, furniture needs went unmet, book purchasing ceased for a brief period, salaries were decreased and some staff terminated, and the Library closed early to save on expenses.

The staff soon discovered the building's many physical defects. The power plant was not large enough to run the lighting and the ventilation systems, but the engines were noisy enough to annoy readers in the periodical room above. The basement was too damp to allow storage of periodicals and newspapers. The architect had provided for a single passenger elevator but no service elevator, lighting was too dim in several reading rooms, and the ornate walls lacked clocks. Call-slips dropped out of the containers and remained lost in the pneumatic tube system. The book railway repeatedly broke down. Transporting oversized books by the book elevators proved impossible without delay and damage, with the result that the collections of architecture, fine art, technical arts and music all had to be moved to the Special Libraries floor. The cards in the card catalogue had been punched to fit the rods, but many shelf numbers were punched out in the process, making it impossible for users to record them correctly. Yet despite the problems, the number of users surpassed all expectations: the Newspaper and Periodical Rooms, the Children's Room, and even Bates Hall, the vast general reading room, were constantly crowded.

Since it was immediately evident that extensive changes were needed, by 1898 the trustees obtained authorizing legislation and an act of the city council that provided a special appropriation of $100,000 for doubling the size of the Children's Room and the Ordering Department, moving the Newspaper Room and returning that space to its intended use as a lecture hall, building library administrative offices and adding the old office space to the Delivery Room, where improved tubes and carriers provided for the first time complete intercommunication among the three stack areas.[27] A new Branch Division office, offices for the Editor, and the chiefs of the Issue and Ordering Departments, and space for a staff lunchroom and locker rooms were laid out. Rooms were constructed for the chief janitor, the custodian of library supplies, and for sorting collection duplicates. Workmen installed two additional elevators. Putnam dryly noted that "in the case of the heating and ventilating system, the total work actually done has exceeded by a hundred per cent the work originally planned," but the extent of the frustration of trustees, staff, and users became even more obvious when he commented that only the "most embarrassing difficulties have been overcome, and the most pressing needs of the moment have been met."[28]

Characteristically, on the very next page of Putnam's 1898 report, he turned to a review of the needs of the branch libraries, terming them "ill-proportioned to existing needs" and condemning one branch located "in a neighborhood tending to demoralize its readers," as "meagre, ill-ventilated, inconvenient and uninviting." Estimating the cost of essential alterations systemwide at $500,000, and echoing several years' worth of complaints from the Examining Committee, he added that "A supreme advantage would be the application of such a sum all at once under a general scheme of improvement." But while the city appropriation had grown to $245,000 by 1899, the loss of income from fines and from the sale of the old library building (which had been returning rental costs to the budget), while staff and maintenance costs increased meant that the book budget showed an actual decrease.[29]

At this juncture, President William McKinley asked Putnam to become Librarian of Congress. His work in Boston had greatly enhanced his professional reputation: he was one of a group of American Library Association leaders testifying before Congress in 1896 regarding the status and role of the Library of Congress, and he had been elected president of the Association in 1898, succeeding the deceased Justin Winsor. Putnam resigned his position reluctantly,[30] for the Library of Congress salary was less, its political demands were far more intense, and the challenges were even greater than those he faced in Boston. But he found the call to the national library, with the prospect of extending library services--on not only the federal level but to every library in the land--extremely compelling. Sending his resignation to the trustees on March 18, 1899, Putnam received their gratitude for "the harmonious and helpful relations between the Librarian and the Trustees from the day he accepted office; the remarkable administrative qualities he has shown--in directing the alterations . . . in increasing to so large a degree the interest the public takes in the Library, until today it has a larger constituency than any other--in instituting so successfully the work of the Public Library in connection with the Public Schools--and in making the public realize that this institution created and supported by it, really belongs to it, and needs its ever-enlarging patronage and generosity."[31]

As we look back on Herbert Putnam's career, it seems evident that one of the most important lessons he learned in Minneapolis and Boston was the value of allying private wealth with public institutions. Particularly in Boston the rich special collections--among them the Ticknor collection of Spanish literature, the Bowditch collection of mathematics, the Lewis collection of early printed books on America, the Allen A. Brown music library and the Chamberlain collection of autographs--provided the distinction of fine research holdings to a municipal institution. Endowed libraries, identified by name with the original donor, Putnam observed, sooner or later would lack the necessary funds for administration while public institutions funded on an ongoing basis could freely invite benefactors to share the honors of association.[32] He was fortunate to enjoy this advantage in Boston, for it would take fully a quarter century of his hard work before the Library of Congress equaled the Boston Public Library in either splendor of collections or munificence of donors.

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[1] Gratia A. Countryman, "Mr. Putnam and the Minneapolis Public Library," pp. 5-9 in William Warner Bishop and Andrew Keogh, eds., *Essays Offered to Herbert Putnam By His Colleagues and Friends on his Thirtieth Anniversary as Librarian of Congress, 5 April 1929* (New Haven: Yale University Press, 1929); David Chambers Mearns, "Herbert Putnam: Librarian of the United States, The Minneapolis Years," *Wilson Library Bulletin* 29 (September 1954): 59-63.

[2] Herbert Putnam, "The Public Library in the United States: Some Recent Phases and Tendencies," *International Monthly* 3 (January 1901): 57.

[3] Walter Muir Whitehill, *Boston Public Library: A Centennial History* (Cambridge: Harvard University Press, 1956): 109; see also Horace G. Wadlin, *The Public Library of the City of Boston: A History* (Boston: Printed by the Library and Published by the Trustees, 1911).

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[4] Whitehill, *Boston Public Library*, 115-16; 127-30. The Librarian's duties were usurped by Board President William W. Greenough, who retired in 1888, and by Samuel Appleton Browne Abbott, his successor. Dwight was the former librarian of the Department of State and archivist of the Adams Family archives.

[5] "Mr. W. F. Poole's Remarks at the Publishers' and Booksellers' Dinner," *Library Journal* 15 (December 1890): 164-66; *Library Journal* 15 (October 1890): 291-92; 297-302. The design and cost of the building also provoked local controversy and was ultimately the subject of a mayoral investigation; see Whitehill, *Boston Public Library*, 152-58. Whitehill also discusses the 1896 controversy over the sculpture "Bacchante and Child," which was presented to the Library by architect Charles Follen McKim.

[6] C. C. Soule, "Boston Public Library," *Library Journal* 17 (February 1892): 54-55; C. C. Soule, "The Boston Public Library," *Library Journal* 17 (March 1892): 88-94; C. C. Soule, "The Boston Public Library-III," *Library Journal* 17 (April 1892): 124-25; C. C. Soule, "The Boston Public Library," *Library Journal* 17 (October 1892): 425-26. The trustees had since about 1890 been adding heavily to the Library's scholarly collections rather than concentrating on works of "common interest;" see Whitehill, 123-24.

[7] C. B. Tillinghast to Dr. Benton, 18 January 1895, Herbert Putnam Papers, Manuscript Division, Library of Congress; for the profession's reaction to the appointment, see *Library Journal* 20 (February 1895): 43.

[8] *Library Journal* 20 (June 1895): 197-98; *Boston Daily Globe*, 6 February, 14 March 1895. Librarians nevertheless continued to criticize the building; for example see *Library Journal* 21 (July 1896): 333 for a summary of William I. Fletcher's "Boston Public Library," published in *The Critic*, June 27, 1896.

[9] Putnam's letters, (Putnam Papers, Manuscript Division, Library of Congress) reveal that his self-possessed public manner covered private misgivings and severe self-criticism, particularly before his Library of Congress appointment. His appointment to the Minneapolis directorship at a very young age almost certainly made such self-assurance a necessity.

[10] Boston Public Library Records of the Corporation, 5 February, 16 April 1895, Rare Books and Manuscripts Department, Boston Public Library (hereafter BPL Records); Charles F. D. Belden, "The Library Service of Herbert Putnam in Boston," pp. 10-14 in Bishop and Keogh, *Essays Offered to Herbert Putnam*.

[11] By-laws of the Trustees, adopted 3 December 1895, Rare Books and Manuscripts Department, Boston Public Library.

[12] *Annual Report of the Trustees of the Public Library of the City of Boston, 1895* (Boston, Rockwell and Churchill, City Printers; hereafter *Annual Report*), 35-36.

[13] We would today call the Issue Department the Circulation Department.

[14] *Annual Report, 1895*, 50; Whitehill, *Boston Public Library*, 167.

[15] Winsor had wanted to establish a similar service but had no available space; see Whitehill, *Boston Public Library*, 146. The Children's Room was part of the original plans for the new building; see Belden, "Library Service," 11.

[16] Herbert Putnam, "The Public Library and the Common School," *The Congregationalist* 81 (13 August 1896): 214-15.

[17] Quoted in Whitehill, *Boston Public Library*, 175; for the Examining Committee report see *Annual Report, 1895*, 45.

[18] No new branch libraries had been established since 1880.

[19] *Annual Report, 1896*, 46.

[20] *Annual Report, 1895*, 32-33; *1898*, 57.

[21] Putnam had a volunteer committee read and report on new fiction, but he recommended fewer than 200 new titles each year, and he made it clear that the librarians and trustees, not the volunteers, made the selections. After his departure, and before the selection of an Acting Librarian, two Library employees protested the policy on fiction purchases. It is unclear whether the conservative selection they criticized was Putnam's policy or the trustees' decisions on fiction purchases after his departure. Putnam, however, was strict about the selection of titles for the general public, vetoing books that he considered in poor taste. List most librarians of the 1890s, he sequestered salacious titles and possibly also controversial political literature; see Evelyn Geller, *Forbidden Books in American Public Libraries, 1876-1939: A Study in Cultural Change* (Westport, Conn.: Greenwood Press, 1984): 61-66.

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[22] *Annual Report, 1897*, 42-43; *1898*, 57; *1899*, 78.

[23] These statistics should be distinguished from those of earlier reports since Putnam published only home use figures while earlier reports had taken into account the use of books within the library building.

[24] By 1898 this proportion had decreased by nearly ten percent.

[25] *Annual Report, 1898*, 38. Putnam and James Whitney, the head cataloger, attended the London meeting. Putnam was an official U.S. delegate, along with Justin Winsor and Melville Dewey.

[26] *Library Journal* 21 (October 1896): 440; 22 (Oct. 1897): C81.

[27] In fact, the original building plans did not include an office for the Librarian--an interesting indicator of the trustees' contempt for the profession; see Whitehill, *Boston Public Library*, 145.

[28] *Annual Report, 1898*, 19-20.

[29] *Annual Report, 1898*, 21. The sale of the building was mandated, and the return of the fine money was the result of an 1898 city ordinance.

[30] For the circumstances surrounding the appointment, see Jane Aikin Rosenberg, *The Nation's Great Library: Herbert Putnam and the Library of Congress, 1899-1939* (Urbana: University of Illinois Press, 1993), 19-22.

[31] BPL Records, 21, 24 March 1899

[32] Herbert Putnam, "The Great Libraries of the United States," *Forum* 19 (June 1895): 491-92.

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Guidelines for Library Services to Persons with Dyslexia

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Within the last ten years there has in many countries been an increasing interest in dyslexia – of specific learning difficulties – not only among scientists and other professionals, but also in the general society.

Dedicated persons both here in the United States and in Europe have done a wonderful work to inform about dyslexia and how to help persons with dyslexia in different ways.

Much has been achieved - but we still have a long way to go.

I think I can say without exaggerating that a good deal of the positive results obtained happened thanks to the NGO organizations: the American International Dyslexia Association and the European Dyslexia Association of which I am one of the founders and which by now includes about 30 countries and territories in and outside Europe.

Thanks to national and international campaigns both associations have done a great work to focus on this invisible disability. Let me just mention one campaign run by the European Dyslexia Association during 1993: "The Year of Early Recognition". The slogan of this campaign was "Early Help – Better Future" and the aim of the campaign was to raise awareness of the need to help children showing signs of dyslexia as early as possible, which means before school age. The campaign raised the awareness not only of pre-school teachers and teachers but also of persons working in the medical field. As the chair of the campaign, I was especially pleased to see that children's librarians also showed great interest in improving their services to children with reading problems.

But in spite of the growing understanding of dyslexia in many countries most persons with dyslexia still hesitate to reveal their disability. No wonder, because during their time in school many of them have been told over and over again that they were stupid, lazy or misbehaving. One defeat followed another, and many persons with dyslexia are marked for the rest of their lives.
How do you think these people feel getting into the library? Passing the threshold – both the physical and the psychological one – into the library is extremely difficult for many persons with dyslexia. You may have experienced a similar feeling standing in front of a very exclusive shop: "Should I enter? Do I have anything to do in there?" This is exactly how persons with reading difficulties feel standing in front of the "castle of knowledge". "What do I have to do among all these reading persons who can manage everything?" or as a friend of mine once said: "I don't visit the library, because I don't want any more failures".

Of course, all of us here know what a wonderful feeling it is to enter a library, but do we prevent some people from sharing this feeling with us because we do not know enough about their situation and their needs? Or maybe even because we consider them a little bit "difficult" to deal with? We would like everybody to use our libraries but we should realize that some people do need a special attention and understanding.

I am aware that the tendency in many countries is to focus entirely on education of persons with dyslexia. The role of the public libraries is underestimated, but all of us here know what an important role information and culture play in the daily life of both children and adults.

Therefore I was very pleased when in 1997 the issue dyslexia/reading difficulties and the role of the libraries were brought to international attention at the IFLA International Conference in Copenhagen. A workshop "Access to Information: Serving Persons with Dyslexia" was arranged by the IFLA Section of Libraries Serving Disadvantaged Persons (LSDP) in co-operation with the Danish Professional Group of Outreach Library Services to Disabled Persons and the European Dyslexia Association (EDA). The workshop was completed by a poster session on dyslexia.

During the Copenhagen Conference, we noticed that there was a high degree of ignorance about dyslexia among colleagues from all over the world. On the other hand, we also noticed much interest and understanding, and many participants in our workshop expressed their intentions to go back to their countries and improve their services to citizens with reading difficulties

At the 1999 IFLA Conference in Bangkok, LSDP and EDA likewise presented a poster session on dyslexia, "Dyslexia is everywhere. What does your library do?" An information leaflet was produced of which we have brought some copies today for those of you who are interested. Birgitta Irvall from the Swedish Library of Talking Books and Braille and I were delighted to inform many colleagues from all over the world about dyslexia during that week in Bangkok.

At that time, the European Dyslexia Association had been granted Consultative Status to IFLA, an honor we consider an acceptance and understanding of dyslexia from the international library community.

As a natural consequence of this positive development the Section of Libraries Serving Disadvantaged Persons wanted to continue and expand on the 1997 and 1999 initiatives with a guideline for everybody working in libraries. Birgitta Irvall and I were happy to take on the job of writing these guidelines.

And now here it is: the "Guidelines for Library Services to Persons with Dyslexia", the 70th IFLA Professional Report.

Birgitta and I are grateful to the many persons who helped develop this publication: the members of our standing committee, colleagues in Sweden and the European Dyslexia Association. We would also like to thank Vibeke Lehmann for her editional assistance

The Guidelines bring official definitions of dyslexia, and clarify a very important point, namely that dyslexia is **not** related to social status and that dyslexia does **not** mean lack of intelligence. People with dyslexia are just as individual persons as the rest of us; some are very bright, some are less bright. Some people with dyslexia are known as being very creative and many famous artists and scientists like for instance Leonardo da Vinci, Auguste Rodin, Hans Christian Andersen, Albert Einstein and Niels Bohr, are known to have had difficulties reading and writing.

The democratic right to access to culture, literature and information extends to all – including those with reading difficulties. It is of vital importance that **all** citizens are able to obtain information about what is going on in society. In order to exercise one's democratic rights and control one's own life, every citizen must be well informed.

Reading promotion is strongly supported by the Standard Rules of the United Nations concerning persons with disabilities, the UNESCO Public Library Manifesto, and the Charter for the Reader.

The main objective of the Guidelines for Library Services to Persons with Dyslexia is to change the attitude of the library community by informing about the needs for persons with dyslexia coming into the library.

We also want to emphasize the responsibility of both library schools and the libraries themselves to provide both the basic and the continuing education of the library staff – so they have the necessary knowledge to welcome persons with dyslexia.

In the Dyslexia Guidelines we also recommend to invite representative from the dyslexia community to the library to discuss their needs, because **they** really are the "specialists".

A co-operation with the national or local dyslexia associations is warmly recommended and there is a list of dyslexia associations in the back of the Guidelines. If a dyslexia association does not exist in your country: why don't you take the initiative to start one?

We are aware that the necessary materials for persons with dyslexia do not exist in some countries. As cultural institutions, libraries **could** take initiative to start a production of Easy-to-read literature or books on tape/CD if these materials are not readily available.

The Guidelines also include examples how the library can make persons with reading difficulties feel welcome in the library by creating pleasant surroundings.

We introduce the concept "My own librarian", knowing how important it is to a dyslexic person to have one person in the library with specialist knowledge of both reading difficulties and appropriate materials. But we also point out the importance of the entire staff having a basic knowledge about dyslexia so that they can welcome the dyslexic patron when he has crossed that famous threshold. One thing you can be sure is that a person, unfamiliar with the library who was received in a negative way, will never return to the library.

The Guidelines bring translations from a Swedish book "Det var ju inte dum jag var" ("I wasn't stupid after all. Thirteen dyslexics demand to be heard") published in 1996. Roger, a 42 years old dyslexic man, writes:

"Should I forget it or should I go in? Soon I was there, outside the library, and kept on sitting in the car. I debated with myself, should I forget it or should I actually go in. Libraries are old with narrow rooms; they are dark places with books from floor to ceiling. Like in the school library where the teacher was sitting. After that, I had never again gone to such a place, never in my life.

I will just begin to stutter, I thought, and I won't be able to get a word out... Maybe people will stop and stare at me. I couldn't think of what to say to the librarian, but that was not as important as just taking the step inside.

Then I gathered up all my courage. Carried it with me.

Must first walk around the library, size it up, absorb the atmosphere, really feel the place.

The people there were mostly young. I didn't think they were looking at me when I went over to the talking books, in the middle of the room. So easy to be able to stand just in the middle of the library and look at the talking books. So easy it was to find them, they were not hidden away into a dark corner

Here I was in the middle of the room, after all like anybody else. I didn't stand out in the crowd. A blind person has his white cane, a deaf person has his hearing aid, but my problem doesn't show until I write, until I read. It becomes such an emotional thing, so charged.

But now I have been in the library for a while and have gotten used to it, I have stepped inside. The next thing to do is to walk over and talk to the librarian."

We hope that these Guidelines will inspire libraries to help dyslexic people in accessing information and culture on equal terms with other citizens.

So please read the "Guidelines for Library Services to Persons with Dyslexia", be inspired, and create a library for everybody. And use this publication to fit your individual circumstances.

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Library quality reference meets the World Wide Web

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Abstract:

The explosion of information and the popularity of the Internet and commercial search engines have required librarians to look afresh at their profession. With the overwhelming amount of information now available has come new demands and expectations. The need to bring information to the remote user has encouraged the creation of many innovative services linking new technology with traditional library services. How do librarians build on their ages-old status as trusted advisors and create services that will both meet demand and revitalize the profession? How do we take the reference desk to cyberspace? The Collaborative Digital Reference Service (CDRS) launched by the Library of Congress and partner libraries is one such response. CDRS provides professional reference service to users anytime anywhere through an international digital network of libraries. This paper explores how CDRS began and what lies ahead for this and other innovative E-reference services.

Brave New World

The world of the reference librarian is changing; list serves are crammed with queries from librarians seeking advice on setting up 24/7 live reference and chat services, job announcements search for "energetic" "dynamic" and "highly motivated individuals" to lead teams in implementing "innovative tools and services." Cybrarian versus librarian debates abound.

Workshops and training classes instruct librarians in the art of providing distance reference to wherever the patron may be. At recent meetings of the American Library Association (ALA), the virtual library was very much in evidence featuring panel discussions and several demonstrations of live chat software which many libraries are experimenting with. Throughout ALA and other professional meetings, the virtual library has been demonstrated, evaluated, and ultimately validated as scores of librarians share their personal experiences in evolving traditional services into the online environment without sacrificing quality or accuracy. But we didn't just get there overnight.

Digital reference has been evolving over the last several years. According to an article by Bernie Sloan, Senior Library Information Systems Consultant, the University of Illinois Office for Planning and Budgeting, that was recently posted to DIG_REF, a list serve that addresses online reference, the first widespread use of technology in support of digital reference services was email with articles about such services appearing in several professional journals in the early 1990's.

The use of MUDs and MOOs, interactive environments where users could exchange information, for reference services appeared in the mid 1990s, at about the same time that the interest in e-mail reference began in earnest. Interest in the use of desktop video conferencing also peaked in the mid 1990s, with pilot projects conducted at the University of Michigan, and at the University of California-Irvine. These two projects appeared to meet with limited success so video reference faded from view.

Chat-based technologies for reference services have emerged in the last two years and have really captured the imaginations of librarians. While there are many software packages to choose from, most offer co-browsing capability, enable the librarian to "push" Web pages to the user and provide full summaries of the transactions.

We can begin to wonder whether digital reference services will become yet more automated? One project to watch is the OPAL Project at the UK's Open University which is exploring the development of a fully automated online 24/7 reference service for students. The project will attempt to use agent-based architecture to create a generic "artificial librarian", capable of answering complex questions about library resources.(See: http://oulib1.open.ac.uk/wh/research/opal/intro.html).
Imagine R2D2 at the reference desk!

Higher education is also going through a sea change that could be a harbinger of things to come for libraries and librarians, both in terms of the collections they build and the communities they serve. With distance education on the rise, (according to the National Center for Education Statistics, enrollments in distance education classes have more than doubled, increasing from 753,640 in the 1994-'95 school year to 1,632,350 in 1997-'98), it is harder for college and university libraries both to define and then serve their primary clientele. If students can come from anywhere, the physical boundaries that separate institutions of higher learning from one another become meaningless. In the April 2001 issue of ***Computers in Libraries***, author Steve Coffman suggests further that "it is not hard to imagine the development of virtual libraries with well-selected electronic content coupled with online reference services to help students find their way around. Schools would 'subscribe' to these libraries, just as they now subscribe to electronic databases. Instead of having a whole crew of reference librarians sitting at desks in the building, your reference librarians would be online where they could handle reference traffic from many institutions at once."

Who Needs Libraries?

The challenges for libraries and librarians remain, however. Though more and more users are online, study after study confirm that the Internet is complex and hard to use. An article in ***NewsFactor Network*** April 9, 2001 (http://www.newsfactor.com/perl/story/8806.html) revealed that the general public is becoming increasingly frustrated by slow and unproductive Web searches, and that breaking points are reached in as little as 12 minutes. This frustration, dubbed "internet rage," claimed that 71 percent of British Internet users have suffered from it at one time or another. The study, commissioned by WebTop, a British Web indexing company, goes on to point out that the sheer volume of information available on the Web -- and the slowness in accessing it -- causes a great deal of stress as users are becoming increasingly frustrated by irrelevant responses brought up by search engines. The study's author, Edward Kerr summarizes what many of us have personally experienced, that search engines " may produce thousands of results, but often these are full of links to useless information, advertising banners and promotional garbage, and not to the information the person is looking for."

In addition to causing frustration to users, the best search engines still cover only a third of the Web; the rest is "invisible" - hidden in databases that search engine spiders cannot penetrate. So librarians are needed more than ever to sift, sort, select and serve information.

One salient difference between libraries and their online information service counterparts is that the numerous web-based reference services search only the Internet, not the vast collections found in libraries nor the thousands of library online catalogs that describe and manage those collections. Libraries, with their vast collections of artifactual knowledge, host inestimable opportunities for information mining. For just as the Internet is growing -- more than 1 billion pages and counting -- so, too are libraries. According to Bowker Annual 2000 more than 806 million volumes are housed in academic libraries in the United States alone. Moreover, of these 806 million, 449 million are unique and only available in one particular library. These are entire works, not single pages or journal articles and these figures do not include non-print format materials which are also increasing in number.

In addition, libraries are stocked with reference staff who have carved out areas of subject specialization often built upon years of academic study and personal experience. Let's face it, there is no substitute for the daily practice of sitting at the reference desk and fielding questions that can come from anywhere and cover just about anything.

Libraries Must Build on Traditional Strengths

Libraries are different from the Internet in a number of other ways. For example, librarians organize information using controlled vocabularies and other standard tools to make materials accessible. Librarians evaluate materials according to documented policy statements and guidelines before selecting them. Library collections are unlimited in scope and include print, non-print and digital formats. Patrons can now conduct research and ask questions in person, in writing, by phone and fax, and online by email and there is a plethora of the aforementioned "live chat" software programs to choose from. The hallmarks of libraries, structure and organization, in-depth subject expertise, community-vetted standards and best practices and analog collections enable libraries to complement the universe of unstructured and unverified information on the Internet. By so doing, librarians can bridge the gulf that exists between providers and users of information.

The Collaborative Digital Reference Service (CDRS), launched by the Library of Congress in the spring of 2000, provides professional reference service to researchers anytime anywhere, through an international, digital network of libraries and related institutions. With a growing membership of more than 100 libraries, CDRS enables libraries to help each other serve all of their users, no matter where the users are.

CDRS combines the power of local collections and staff strengths with the diversity and availability of libraries and librarians throughout the world, 24 hours a day, 7 days a week. All reference, all the time .... always a librarian available to provide answers to questions and connect patrons to the resources they need when they need it. The power of CDRS was made evident recently when a patron submitted a query to CDRS through his local public library and was helped by a language specialist at a university library who provided a transliteration of a Saudi place name ... all within a matter of hours. The patron was thrilled to learn that through CDRS he had access to some of the world's most premier libraries and collections.

How Does CDRS Work?

The Library of Congress began building CDRS in the spring of 2000. From the beginning, libraries of all types -- special, academic, public and national -- joined the effort to help shape and define CDRS. The collaboration has been enormously beneficial on many levels as each library brings its special experience, knowledge of user behavior and needs, and subject expertise to bear on the project.

CDRS includes two component parts: submission of question and answer, and archiving of the answer for future use. The workflow looks like this: An end user requests information through a CDRS member institution. The member institution sends the query to the online Request Manager (RM) software for processing and assigning. The RM searches a database of CDRS Member institution profiles looking for the member institution best suited to answer the question. Matches are made on the basis of such data elements as hours of service, including time zones, subject strengths, scope of collections, types of patrons served, etc. The "match making" happens in milliseconds. Once a match on an institution has been made, the query is sent to that institution for answering. After the query has been answered, it is routed back to the original CDRS requesting library via the RM to allow for closing out the case and completing other administrative tasks.

The library profile is the core of the routing and assignment activity, and each institution can "code" itself as broadly or as narrowly as it chooses. Library profiles contain basic information about the library including hours of service, collection strengths, staff strengths, education levels served, languages covered, geographic location of users served, whether there are special services provided and what they are -- as many as 28 data fields. This information is captured in a table where it is used by the online RM to sort, assign and track incoming questions and to deliver answers to the end user that are edited and stored in a separately searchable knowledge base of information. The knowledge base, to be populated with the diverse and authentic information provided by CDRS librarians, will ultimately serve as a front end to CDRS, designed to "catch" and answer incoming questions if there is a ready match. If there is no match on the knowledge base, the question will be routed through the RM and assigned to a library. Further, the profile tool is flexible enough to allow for regular updating to reflect staffing changes or special circumstances that would affect the automatic routing by the RM. For example, if the astronomy specialist is on sabbatical for several months and no back-up is available, the library might choose to remove that subject strength from its profile until the staff member returns.

*The illustration diagrams the work flow process.

If you build it, will they come?

16 libraries began the journey to build CDRS and defined the business rules and concept of operation by which CDRS would be created and implemented. For example, we agreed that: CDRS is a membership model; CDRS builds its infrastructure once and shares that "cost" among its members so all can afford to use the service; CDRS members need only Internet access, a browser and email to use it; quality is number one and policies, certification and Service Level Agreements (SLAs) are enforced to ensure that the brand lives up to the market's expectations; the technology platform is built to serve the membership as a whole; and CDRS is an international service that does not provide preferences to certain jurisdictions or members.

The implementation process began by initiating a series of pilot tests of the technical solutions. Pilot 1 had two principal goals: to test the effectiveness of the library profiles and to test a web form for submitting questions. In Pilot 2, we added more institutions worldwide, increased the number of questions asked of the system, revised the profile database, and began to experiment with software packages to serve as the Request Manager. On the administrative end of the project, we began to develop a variety of SLAs, to identify staff training needs, and to identify the roles of a CDRS volunteer advisory board.

The first "live" question was posed on June 29, 2000. This reference inquiry – regarding ancient Byzantine cuisine -- was sent by EARL Ask-A-Librarian , a participating public library consortium in the UK. The request, received by the CDRS server at the Library of Congress in Washington, was matched based on subject matter, depth of detail, and time of day, and routed to the Santa Monica Public Library at 10:40 a.m. Several hours later, a list of five books was on its way to London. So the "test" worked and we were on our way. During its first month of "live" testing, the member institutions exchanged more than 300 questions, creating a virtual reference desk spanning three continents and 15 time zones.

Pilot 3, which began in the late fall of 2000 and will continue through the end of this calendar year, focuses on scaling up the workflow, determining the needs for manual and automated backup systems such as an "on call librarian," and developing and implementing the knowledge base. The "on-call" librarian will not only ensure that no question is lost in the system but will provide technical support if CDRS goes down. The knowledge base will enable us to capture and reuse content. We are pleased to announce that a prototype knowledge base is being tested and shows real promise as a ready reference tool.

From the beginning this has been a collaborative process in every sense of the word and the rapid development of CDRS owes a lot to the resourcefulness and prescience of its early adopters. The volunteer advisory board, comprised of representatives from member institutions, meets regularly to discuss policy and future directions. Business meetings are also regularly held to get feedback, to report on and solve work flow problems, to discuss training and performance measures and build esprit de corps. The CDRS home page posts general information and news links, information for members and project milestones. A list serve allows members to communicate freely and frequently with one another and get technical questions addressed.

The Whole is Greater Than the Sum of the Parts

I am often asked whether there are any restrictions on the types of libraries that can participate and the simple answer is that there are none. The aforementioned service level agreement defines the nature of the member library's relationship to the CDRS and that agreement is codified in the library profiles. Many types of agreements are possible and are limited or expanded depending upon the strengths or limitations of the individual library. For example, a library may agree to: ask and answer questions; only ask questions; ask or answer questions only during specified periods; serve as an editor for the knowledge base; or serve as the on-call library if the automatic request manager function is inoperable.

In addition to defining roles and responsibilities among the partner libraries, the service level agreements will ultimately be used to determine what it will cost a library to be a member of CDRS. The planners have been examining a variety of funding options with the goal of being as flexible as possible both to allow for the broadest participation among types of libraries and to ensure that no one library or group of libraries has to bear all of the costs of establishing and sustaining CDRS.

Beginning with the ALA mid-winter meeting in Washington in January 2001, the Library of Congress has been collecting data on the value of CDRS through a series of live interactive sessions and an online survey. This information has been invaluable to the planners of CDRS in that it affirmed support for CDRS and its mission to have credentialed experts provide high quality information, and affirmed a willingness to pay for such a service.

We have encouraged maximum flexibility in developing the many component parts of CDRS. For a library to want to participate in CDRS, CDRS has to be perceived to have value. Just as there are no "one size fits all" libraries, so too are there no "one size fits all" arrangements with CDRS. Libraries are structured and organized differently, they have different local audiences and they have different policies and procedures for ensuring quality control. It has to offer something that the library does not already have, e.g., adequate staff, extended hours of service, a subject strength, a special collection unique to a participating library that the whole collaboration then has access to. When the participating library defines the terms of that value, that library will have greater incentive to make the arrangement work, for itself and for CDRS. Our job is to create the tools, the library then decides for itself how to make the relationship work.

So how is CDRS working for members? A recent informal survey of the membership confirmed that the members feel they benefit from participation in CDRS and in those instances where CDRS implementation has worked best, there has been strong management, reference staff and patron support for the service. Librarians believe that their patrons are benefitting from CDRS citing the high quality information that they received and would not have been able to provide from their own resources and the ability to offer the service rather than having to refer clients to other institutions where they may or may not get the information they need. Librarians also believe that they benefit as professionals both from the collegiality of the interchanges with other libraries and from the challenges questions sent to them often pose. They love having access to reference professionals and collections around the world that can help them provide the best information to their patrons. Librarians are interested, too in the learning process that comes with trying something new and they welcome the chance to rethink how they deliver reference services to their campuses and communities.

Where Do We Go From Here?

In January of this year, the Online Computer Library Center (OCLC) and the Library of Congress on behalf of its member libraries, signed a cooperative agreement to guide CDRS through its next phase of development. According to the agreement, OCLC will provide technical and development support to CDRS by: building and maintaining a database of profiles of participating institutions that will provide answers through CDRS; building and maintaining a question-and-answer database system that will enable CDRS participants to catalog answers and store them in a searchable and browsable database (knowledge base); and providing administrative support for CDRS, including marketing, registration of new members, training and user support. Together, the Library of Congress and OCLC expect to develop a viable model for a self-sustaining digital reference service and promote CDRS in the library community.

Currently, libraries participating in CDRS connect with other libraries on behalf of end users so that libraries can define the parameters, determine what works and what does not work and create a service that is scalable and maximally responsive to user needs. From the beginning, however, we have envisioned CDRS to be a service that will be available directly to end users. We recognize that many individuals never go to their local library but still need information. And we want them to benefit from the power of a network of libraries that is dedicated to providing 24/7 reference service anytime, any where. Over the next several months, CDRS will be developing a document delivery project to capture bibliographic information in the question/answer process that can be used to initiate an automatic interlibrary loan. This is the first step in building what we hope will be "one stop shopping" for reference and information services.

As we build CDRS, we are performing a number of behind the scenes analyses to ensure economic sustainability, such as creating a marketing plan to attract new customers and determining the most cost-effective means of administering the network. We are continually examining our technical solutions to ensure that we have the right ones to meet our mission, and that the tools we have created are easy for librarians to use. As we look to expand globally, and become a true 24/7 service, there are many issues we must think through: language and literacy, service to local populations in their own language, acceptable Internet access and technical infrastructure support mechanisms for a constituency that is the world, cultural and political sensitivities, e-commerce and trade agreements that may affect pricing models. The solutions to these issues will determine the long-term success of CDRS.

Final Thoughts

In this paper, I have focused on the ways in which one group of libraries has used technology to link those in need with credible and accurate resources. CDRS is one of many experiments going on in the profession, innovative and creative projects designed to make information available faster and more effectively to meet more specialized demands.

Mark Twain would agree that reports of the death of libraries have been greatly exaggerated. Yet it is undeniably a watershed moment for our profession, a time to reinvent ourselves and to adapt our skills to the demands of the protean universe of information. At no other time in history has the emergence of technology affected so significantly the core mission of a library. These technological advances have created new opportunities for libraries, information managers, researchers and library patrons of all kinds. Indeed, the Internet has created a fundamental change in the way people collect information and acquire knowledge. Instead of a trip to the library, researchers turn first to the Internet. The challenge for librarians is to leverage the excitement, power and technology of the Internet to create resources and services that researchers will return to again and again.

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Women's Healthcare, Censorship, and the Library: Problems, Issues, Questions

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Introduction

In a recent issue of American Libraries, Nancy Kranich, sitting president of the American Library Association, acknowledged the critical role that librarians play in preventing censorship and ensuring that individuals have unlimited access to all manner of information. "Librarians," Kranich wrote "must act as trailblazers in promoting access to information, and serve as watchdogs in protecting the public's information rights" (Kranich 7). Nowhere is the need for "trailblazers in promoting access to information" more apparent than in the area of women's healthcare information. In the U.S. and abroad, women's access to authoritative, clear, and thorough information about reproductive health and sexuality are increasingly under attack by religious organizations, political groups, and governmental agencies. In her essay, "Censorship and Manipulation of Reproductive Health Information: An Issue of Human Rights and Women's Health," Lynn P. Freedman tells us that "in the last century, contraception and abortion have been one key site of the struggle over reproductive sexuality . . . one key to controlling access to contraception and abortion is to control information about them and their uses"(31). Though censorship of information about women's health is not a new phenomenon, it is increasingly aggressive and destructive to women and girls.

In 1914, Margaret Sanger, founder of Planned Parenthood, was arrested for publishing The Woman Rebel, a magazine addressing women's need for information about methods of preventing conception (Chesler 99). The Woman Rebel violated the aggressive anti-vice laws, known as the Comstock Laws, which preventing distribution of information about contraceptive methods. Articles which were said to violate the Comstock Laws had title such as: "The Prevention of Conception;" "Open Discussion;" "Abortion in the United States;" and "Can You Afford to Have a Large Family?"(Sanger 87). From our vantage, nearly one hundred years later—when more than sixty percent of women in the U.S. use some form of birth control (Life 84)—the censorship of such materials seems very old fashioned. And yet, even now, long after Sanger started her struggle to make birth control available, women are regularly denied information about family planning and other healthcare issues.

The censorship of information dealing with women's reproductive health is, in fact, widespread in the U.S. and abroad. Even in highly industrialized nations where women seemingly have access to a range of healthcare choices, subtle censorship of information regarding birth control, abortion, sexuality, and sexually transmitted diseases prevent women from accessing complete, current, and unbiased information about these subject areas. In many parts of the world, censorship is overt and woman and girls lack access to even basic information about their bodies, sexuality, and family planning.

Examples of the censorship of information about reproductive health and family planning are abundant. In many cases, such as the censorship of Margaret Sanger and other pioneers of women's healthcare, the suppression of information about family planning is quite overt. Yet, in other cases, the restriction of information is more inconspicuous and more complicated, as in the case of the misinformation and propaganda surrounding the U.S. Food and Drug Administration approval of RU 486, the so-called "abortion pill." Regardless of the form the limiting of information takes or the source controlling information about women's health issues, such censorship serves to limit women's ability to make informed choices about healthcare. In addition, restrictions on family planning information violate women's rights to control their bodies, their fertility, and their sexuality.

The goal of "Women's Healthcare, Censorship, and the Library" is to explore a number of examples of the censorship of women's healthcare issues, and to investigate issues and questions related to those examples. This paper will look primarily at censorship in the U.S., however the problems and issues discussed herein are international in scope, and some international examples will be examined. Though I will consider and examine the roles libraries have played and might yet play in preventing such censorship, my goal is to call attention to problems that exist more than it is to propose solutions to those problems. There is still much research that must be done in the areas discussed in this paper, and the appropriate courses of action available to libraries in preventing the censorship of women's health information will be clear only in the light of such research.

Concealed and Obscured: Clinical Healthcare Information

In the United States and abroad, information dealing with the complex and sensitive subjects of birth control methods and abortion is often compromised, limited, pulled from circulation, or otherwise prevented from reaching the women who need it. Perhaps the most famous example of the censoring of clinical information about women's healthcare is that of Margaret Sanger who was censored and silenced throughout her lifetime by both religious and governmental forces.

By making it nearly impossible to legally discuss the topic of birth control, the Comstock Laws insured that women would be unable to gain access to information about birth control and thus, would be unable to control unwanted pregnancies. Sanger continually challenged the Comstock Laws by publishing The Woman Rebel and pamphlets dealing with specific methods of birth control. In 1917, Sanger served 30 days in a workhouse for maintaining a clinic that distributed information about birth control. Sanger's various conflicts with the law indicate her determination to "put information and power into the hands of women," at any cost (Steinem 93).

The United States government wasn't Sanger's only adversary. Leaders of the Catholic Church, according to a recent issues of the Sanger Papers Project Newsletter, frequently challenged Sanger in various ways and arranged to have many of her speaking engagements cancelled (1). The Catholic Church's efforts to prevent discussion of birth control, and specifically their efforts to silence Sanger, led to her most memorable protest against censorship. At a lecture in Boston, Sanger appeared on stage with her mouth taped shut. In her comments, which were written out for the audience, Sanger stated that "to inflict silence upon a woman is indeed drastic punishment . . . I have been gagged…yet every time, more people have listened to me . . . more people have lifted up their own voices"(2).

As recently as 1994, members of the Catholic Church were still trying to censor Margaret Sanger. That year, Bishop Robert Carlson tried to have a poster of Sanger removed form the library at St. Thomas University in Minnesota. In spite of Bishop Carlson's objections in which he "likened the Sanger poster . . . to honoring Adolph Hitler, " the poster was defended by the library's Director and was not removed (Gaughan 2). Many alumni of the University threatened to withdraw financial contributions to the University unless the library removed the poster (1). This contemporary attempt to censor Margaret Sanger is evidence of a climate hostile to free access to information about women's health issues. This climate, of course, is not limited to the Catholic community.

The problem of denying women access to information about reproductive health is, in fact, international in scope. One terrifically important and far-reaching example of this is the so-called "Global Gag Rule," which serves to "deny U.S. family planning funds to foreign organizations if they use other, non-U.S. funds to provide legal abortion services or to participate in policy debates over abortion in their own countries"(Lasher 3). The significance of the global gag rule cannot be overstated; women worldwide will be denied access to information and healthcare services as a result of the enactment of this policy. The global gag rule demonstrates the alarming power that a minority of conservatives in the U.S. has to restrict women's access to critical information about family planning all over the world.

In additional to restrictions resulting from outside forces, individual countries often present barriers to women's access to health care information. Governmental agencies often impose laws or enact healthcare practices that prevent women from gaining access to information about reproductive health. In Ireland, for example, "the government did not publish any informational materials on family planning until January 1994"(Coliver 164). Because of strict laws prohibiting pornographic publications, in Kenya "family planning materials may be censored if [they are] found to be obscene or contrary to public morality"(Kabeberi-Macharia 189). In Algeria, information about family planning "was provided in order to promote the government's interests," and thus little attention was paid to the information needs of individual women (Coliver 109).

In her study of reproductive health information in Brazil, Rachael Reichmann notes that the lack of information about reproductive health issues in that country is "not so much a result of active government suppression of information as of government indifference or omission"(121). Though information is not actively censored, "the absence of adequate information about alternative methods of contraception . . . has lead to high sterilization and abortion rates"(Reichmann 132). And while women in Brazil can easily gain access to birth control pills, information about proper use of the pill, side effects, and efficacy is often unavailable or inadequate. "The great majority of Brazilian women have used the pill" Reichmann tells us, "but often incorrectly and rarely with medical supervision"(126).

In the U.S., as well as abroad, efforts have frequently been made to censor women's health information. Conservative politicians and "pro life" activists have worked to prevent free access to information about abortion and birth control methods. An increasingly conservative climate in U.S. politics acts, in many ways, as a threat to women's and girls' access to information about health issues. Planned Parenthood, for instance, is regularly challenged with regard to providing information about abortion and birth control to minors. There is much debate, too, about whether or not health workers in public schools should be able to provide information about birth control and sexually transmitted diseases. In addition, recently proposed adoption legislation would prevent family planning clinics from providing clients with information about abortion. According to The Guttmacher Report on Public Policy, this legislation is "directly aimed at denying women facing crisis pregnancy full information about their options—apparently on the basis of the notion that the best way to promote adoption is to prevent family planning providers from discussing abortion"(1). Of course, preventing discussion about healthcare options only serves to promote ignorance and strip women of choices.

In many countries, including the United States, a lack of appropriate education exacerbates the already significant problem of inadequate information. In Poland, "education about reproductive matters, including contraceptive methods, has always been poor. Popular misunderstandings abound: many think that the pill poses a high risk of cancer; others think that it promotes the growth of facial hair"(Coliver and Nowicka 280). Studies in Chile have found that although "adolescents increasingly have had sexual relations at earlier ages, they have not had access to more information" and educational resources about birth control, STDs, and reproductive health (Iriate and Alexander 147).

Education about sexuality and health is lacking in the U.S. as well, where it is increasingly under attack by conservative groups. In fact, sex education "in all grades is much less likely to cover birth control, abortion, how to obtain contraceptive and STD services, and sexual orientation than it was in the late 1980s"(USA Today 1). Teenagers in the U.S. are so poorly informed about their reproductive choices that "in a 1990 study—conducted more than 15 years after abortion was legalized on a national basis—many teenagers thought abortion was illegal and none said abortion was legal in all 50 states"(Pine and Fischler 307).

Though these cases clearly reflect insufficient access to information, some examples of withheld information are less clearly defined. The misinformation associated with intrauterine devices (IUDs) as contraceptive methods in the U.S. is one such instance. Though IUDs are among the most effective birth control methods and are the "most popular form of reversible birth control in the world," they are not frequently used in the United States (Motamed 1). IUDs are, in fact, "used by 85 million to 100 million women" worldwide and "fewer than 1 million women" in the United States (Canavan 1).

Though at first glance it seems likely that the IUD is unpopular in the U.S. as a result of the frequent occurrence of pelvic inflammatory disease during the 1960s and 1970s which was associated with one "poorly researched IUD: the Dalkon Shield"(Motamed 1), further investigation reveals another possible reason that the IUD has not been well promoted in the United States. Planned Parenthood publications assert that IUDs are useful as a method of emergency contraception, a method that can prevent pregnancy "up to five days after unprotected intercourse"(2). Considering the recent controversy surrounding such emergency contraceptive methods as the hormone pill RU486 (the so-called "abortion pill"), and the Preven emergency contraception kit (which caught the U.S.'s attention when Wal-Mart refused to stock it), it seems that political pressures may play a role in preventing large-scale marketing and distribution of information about the IUD as a contraceptive method and as an effective emergency contraceptive.

Contraception and abortion are not the only areas in which women are denied the information necessary to make informed choices about their health. Studies have shown that in the U.S., "22 percent of pregnancies end in a C [esarean]-section, when authorities, including the U.S. Department of Health and Human Services, have indicated that no more than 15 percent are medically necessary"(Brink 1). In parts of Great Britain, Cesarean section rates are as high as 20 percent (Lancet 1). In some regions in Latin America, Cesarean births account for up to 40 percent of the total births (Belizan et al 3).

Though there are complex social, cultural, and economic reasons for the worldwide increase in Cesarean section deliveries, the general lack of accurate and thorough information available to women is one component of the problem. In his response to a recent study of C-section births in Latin America, Arachu Castro states that "the increase in cesarean sections can . . . be regarded as a process in which women are finally given less information and less choice and in which obstetricians appropriate the central role of childbirth at the expense of the women"(11).

In addition to these areas, we must consider other women's health issues: the problems associated with silicon breast implants, the sometimes fatal side effects of the diet drug combination Fen-Phen which was marketed, in the U.S., primary to women, and the high rate of unnecessary hysterectomy (a recent study stated that hysterectomy recommendations were "inappropriate in 70% of the cases" studied [Contemporary OB/GYN 1]). We might also examine the treatment of Sexually Transmitted Diseases, especially AIDS, and the medical profession's sometimes-questionable handling of women's sexuality and lesbianism. Though these are complex healthcare issues, it seems clear that women are, in many cases, not well informed by their doctors or the medical industry at large. This is a subtle and destructive form of censorship, which prevents women from making informed decisions about healthcare.

Banned and Blocked: Censoring Popular and Informal Information Sources

The censorship of clinical and medical information by healthcare agencies and providers, religious groups, and government agencies is only part of the problem. The same, or like-minded, institutions often censor other informational outlets—popular materials, personal accounts, self-help resources, informal educational information. Preventing access to these materials and resources is as destructive as the censorship of more traditional sources of medical information.

The Boston Women's Health Book Collective recognized women's need for easily understood information about healthcare and sexuality and created Our Bodies, Ourselves in the early 1970s in an effort to meet that need. The book, the writers claimed, was a response to "doctors who were condescending, paternalistic, judgmental, and noninformative"(Diskin and Sanford 1). In their essay, "Women's Bodies and Feminist Subversions: The Influence of Our Bodies, Ourselves: A Book by and for Women," Linda Gordon and Barrie Thorne state that before Our Bodies, Ourselves, "there was virtually no open discussion of sex and reproduction in schools or the popular media, and physicians condescended to women and regularly withheld medical information from female patients"(323). Since the first edition was published, Our Bodies, Ourselves has become so important to women that some 15 versions of it currently exist—in various languages and addressing age- and culture-specific issues—and others are being written by women around the world. In spite of this number of editions and the demand for quality healthcare information from informal or non-traditional sources, Our Bodies, Ourselves has been frequently challenged and censored.

Internationally, the need for books like Our Bodies, Ourselves is great, and the women who write these books face many challenges to provide healthcare information to women in extremely hostile environments. In her essay, "Our Bodies, Ourselves in Beijing: Breaking the Silences," Jennifer J. Yanco tells us that "state censorship is a big issue in many countries…in many societies, the open treatment of women's sexuality . . . is grounds for censorship. For many groups, treatment of lesbianism guarantees that their book will not be published"(Yanco 5). As a result of such state censorship and deeply ingrained social taboos, women in many parts of the world have no forum in which to discuss issues of health and sexuality.

And social taboo is only part of the problem. In some parts of the world, women face the challenge of "creating an environment that is safe from outside dangers. There are cultural/political/social contexts where it's not simply uncomfortable to speak about sexuality; it is actually dangerous"(4). In such environments, the perceived need to prevent women from gaining access to information about their bodies and their health is deemed so important, it actually warrants violence against those who would provide such access.

In the United States, as well as in other countries, demand for useful reproductive health information is great and yet women's access to informal information about healthcare is frequently challenged. Political and economic factors in the healthcare industry have increasingly "cut down [women's] access to health information"(OBOS '92 14). And access to non-traditional sources of information is often restricted. Our Bodies, Ourselves, for example, has faced censorship challenges many times as have books for young adults such as Deal with It! A Whole New Approach to Your Body, Brain, and Life as a Gurl by Esther

Drill, Heather McDonald, and Rebecca Odes and It's Perfectly Normal: A Book About Changing Bodies, Growing Up, Sex, and Sexual Health by Robie H. Harris. In spite of being positive, extremely well reviewed sources of information for young adults--of Deal With It, one critic wrote: "the main message concerns accepting diversity in bodies and lifestyles, taking responsibility, and finding help when you need it"(Cornog 218); It's Perfectly Normal is described as "intelligent, amiable and carefully researched"(PW 248)--these books have been challenged in some public schools and libraries.

Censorship of popular materials is not limited to informational resources such as Our Bodies, Ourselves. In The Right to Know: Human Rights and Access to Reproductive Health Information, Sandra Coliver recounts an instance of censorship in Ireland:

> In May 1992, Easons, the largest national distributor to retail news agents, hoarded and refused to offer for sale virtually all imported copies of an issues of the London Guardian newspaper when they arrived at the airport. The issue included a full-page advertisement with addresses and telephone numbers of Marie Stopes clinics, which provide abortion services in the UK. (171)

Popular women's magazines have been censored in Ireland as well. For instance, blank pages appear in Irish editions of Cosmopolitan in place of advertisements for abortion services and birth control (171).

In the United States, novels and autobiographical books that deal with female sexuality, reproductive health, and similar subject matter have been censored, challenged and banned. Books dealing with rape, incest, birth control, and masturbation have been "targeted for removal from school curricula or library shelves, condemned in churches and forbidden to the faithful, rejected or expurgated by publishers, [and] challenged in court"(Wachsberger ix). The Bluest Eye, by Noble Prizewinner Toni Morrison, has been banned in an Alaska high school because "parents complained that the language was 'obscene' and that it contained explicit sexual episodes"(Sova 12). Renowned young adult author Judy Blume's books have been challenged because of their frank discussion of female sexuality: Forever has been challenged because it "contained 'four-letter words and talked about masturbation [and] birth control'"(52). Blume's Blubber and Then Again, Maybe I Won't have also been frequently banned and challenged in public schools and libraries based on sexual content and language. Margaret Atwood's The Handmaid's Tale was challenged in one case because it was deemed to be "sexually explicit" and in another because "the main character of the novel was a woman and young men were unable to relate to her"(73).

The list of books banned and challenged because of controversial sexual content or because they deal candidly with sensitive issues that are of interest to girls and women is long and includes important works such as The Color Purple by Alice Walker, The Bell Jar by Sylvia Plath, Still I Rise and I Know Why the Caged Bird Sings by Maya Angelou and the anonymously written Go Ask Alice, to name only a few examples (Foerstel 179, 190, 218; Sova 264, 265, 266, 267). Preventing access to these informal sources of information about women's health issues is as deeply problematic as preventing women and girls from accessing clinical information about healthcare.

The Internet filtering systems in use in some U.S. schools and libraries censor countless additional women's health resources, many of which are designed to make healthcare information clear and accessible to the general public. Filters, which claim to prevent users from accessing pornographic materials, often censor materials dealing with legitimate healthcare and sexuality issues such as abortion, AIDS and other sexually transmitted diseases, lesbianism, and safe sex. In his informal study of various Internet filters, Geoffrey Nunberg found that

> SurfWatch has blocked safe-sex information pages at Washington University, the University of Illinois Health Center, and the Allegheny University Hospitals, and Cyber Patrol has blocked the HIV/AIDS information page of the Journal of American Medical association and the site of Planned Parenthood. SmartFilter blocks the safe-sex page of the Johns Hopkins Medical School research group on sexually transmitted diseases. The filters have also blocked numerous sites associated with feminism or gay and lesbian rights. Both I-Gear and CYBERsitter have blocked the site of the National Organization for

Women (CYBERsitter cites the "lesbian bias" of the group). I-Gear has blocked the Harvard Gay and Lesbian Caucus, BESS has blocked the Gay and Lesbian Prisoner Project, and NetNanny has blocked Internet discussion groups on AIDS and feminism. (7)

As Internet filters become more widely used, more and more women and girls (especially those who rely on public schools and libraries for Internet service) will only have access to the information that can slip through Internet filtering systems.Because Internet filters censor information about breast cancer, abortion, STDs, and nearly all topics having anything to do with women's bodies, their use in public libraries has a significant impact on women's ability to locate Internet resources dealing with health issues.

Women's Healthcare, Censorship, and the Library

Libraries, librarians, and professional library associations are famous for fighting censorship and for being advocates for free and equal access to information. Nevertheless, libraries have, perhaps unwittingly, played a role in preventing women from accessing healthcare information. Unclear subject headings, librarian discomfort with sensitive subject matter, and failure to develop and maintain collections of current materials all contribute to create a library environment where women may not have access to the healthcare information they need.

In the areas of women's health and sexuality, Library of Congress Subject Headings (LCSH) are seriously flawed. The headings are, in many cases, unclear, clinical, or too broad to be useful. In some cases, the headings reveal subtle biases that serve to obscure important issues; when one searches for books with the heading "Women—Health and Hygiene," for example, the LCSHs direct her to see also "Beauty, Personal." Conceptual pairings such as this undermine the importance of women's healthcare issues and may even keep women from finding necessary healthcare information resources.

In some cases, LCSHs dealing with women's healthcare and sexuality are simply unclear. A heading like "Sex Instruction" for example, sounds like it would be used to describe guides to having good sex rather than information resources about reproductive health. Actually, the heading is used to describe both kinds of books: titles like Dr. Ruth's Guide to Good Sex and Facts of Life for Children share this heading. In another example, the heading "Sex Customs—United States," is used to describe such diverse titles as High Risk: An Anthology Of Forbidden Writings, The Hite Report: A Nationwide Study Of Female Sexuality, and Sex and the College Girl. Still other headings, like "Women—Sexual Behavior," "Hygiene, Sexual," and "Women—Diseases" are very clinical and, finally, not apt to be very useful in many cases. While reference librarians could surely help a patron decipher subject headings, women may be reluctant to ask for assistance with matters of personal healthcare and sexuality.

And some librarians may, for a variety of reasons, prefer not to answer questions about abortion, birth control, lesbianism, or other sensitive issues. In her essay "The Invisibles: Lesbian Women as Library Users," Heike Seidel states that "many lesbians fear subliminal or openly discriminatory behavior . . . by library staff [and] lesbians feel discriminated against when made invisible in library collections"(3-4). In this way, instead of helping women find information, librarians may actually help to prevent women from accessing information.

In spite of these issues, there can be little doubt that libraries, librarians, and professional library associations are among the most active individuals and institutions fighting censorship today. By adopting the Library Bill of Rights, which states, "Libraries should challenge censorship in the fulfillment of their responsibility to provide information and enlightenment"(ALA), many libraries in the U.S. indicate their commitment to providing free and unfettered access to information of all kinds. In the current debate over Internet filters, perhaps the most contentious and far-reaching censorship battle in recent history, the American Library Association and many individual libraries and librarians have been at the forefront, risking library funding and political support to provide free access to electronic information and to prevent censorship of Internet resources.

With regard to preventing and fighting censorship, libraries in the U.S. are at their best when dealing with the overt censorship of books and other library materials (through public challenges and attempts to remove particular books from libraries) and with the censorship and restriction of Internet resources through the use of internet filtering software. The American Library Association has official positions and policies for addressing these two forms of censorship and is well equipped to support individual libraries and librarians in various ways when they come under fire for resisting internet filtering or censorship of controversial titles.

Libraries and librarians have been less active in addressing other, more subtle kinds of censorship, like the examples discussed in this paper. It is, in fact, quite unclear at this time what role libraries can and should play in providing access to information about family planning, women's health, and related issues. Though libraries in the United States and abroad are often advocates for free access to information of all kinds, the political and social implications of women's reproductive health issues can make such advocacy difficult if not impossible. Because family planning and reproductive health issues are influenced by social, cultural, political, and religious factors, libraries that hope to provide access to information in these areas will face significant challenges and risks.

Nevertheless, there are possible avenues of activism against censorship of women's health resources that libraries, librarians, and especially library associations might explore. Librarians and library associations might work to find new ways to act as information advocates for women, including joining women's rights coalitions and organizations, lobbying politicians, and supporting anti-censorship and pro-women's rights groups. In addition, libraries and library associations might work, locally, nationally, and internationally to form partnerships with healthcare providers, human rights workers, and women's organizations. Such partnerships might enable libraries to take more active roles in advocating for reproductive health information, relevant education in public schools, and community education programs.

In addition to working outside the library with community organizations, much can be done within the library community to prevent censorship of women's healthcare resources. A comparative study of Library of Congress Subject Headings and Sears Subject headings should be conducted to give library professionals a greater sense of the ways current headings might obscure information rather than create access to it. Such a study might lead to positive changes in subject headings and heading assignments. Libraries and librarians can combat censorship by collecting current materials in sensitive subject areas and displaying those materials periodically. And, of course, librarians can, and should, speak out against bias and discrimination in library policies and among library staff.

Conclusions

In 1990, Life Magazine included Margaret Sanger on its list of "The 100 Most Important Americans of the Twentieth Century." In a recent special edition titled "Time 100: Leaders and Revolutionaries of the 20th Century," Time Magazine named Sanger as one the most influential people of the twentieth century. In spite of the fact that our culture currently views Margaret Sanger as a hero, women's access to information about birth control specifically and healthcare in general is often in jeopardy. In her discussion of Sanger for the Time Magazine tribute, Gloria Steinem writes

> One can imagine Sanger's response to the anti-choice lobby and congressional leadership that opposes abortion, sex education in schools, and federally funded contraceptive programs that would make abortion less necessary . . . and that holds hostage the entire U.S. billion-dollar debt to the United Nations in the hope of attaching an antiabortion rider. As in her day, the question seems to be less about what gets decided than who has the power to make the decision. (84)

Steinem's statement reminds us, also, of the many healthcare workers who have been victims of assault and attempted murder and those who have been murdered as a result of their efforts to provide women free access to healthcare. It is impossible to ignore the consistent problems associated with women's access to healthcare and information in light of this violence.

Though censorship in all its forms is dangerous, the censorship of information about women's health issues is an actual threat to the health and well being of the women who are denied access to information. Margaret Sanger's struggle to make information about contraception available to all women was a fight for control and power as much as it was for information. That struggle continues, as girls' and women's access to information is challenged and restricted.

"Access to information is a right only in the abstract," Nancy Kranich tells us. "It is up to librarians to ensure that this abstract concept becomes concrete, and to continuously communicate the importance of access to information"(Kranich 7). Whether librarians will strive to make concrete women's rights to healthcare information--and thus greater control over their bodies, health, and well being—remains to be seen. At a time when conservative politicians and right-wing groups threaten women's rights, libraries and librarians can be powerful allies to women all over the world. The risks to libraries, however, may prove to be too great.

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Information Needs of Women: Addressing Diverse Factors in the Indian Context

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The information needs of women and their views on available information have hardly been studied as a research topic or as a critical issue within the information system. It is surely a pity that the need for information and access to information for women have not been taken as a serious matter in the field of library and information services. In the Indian context it is even more so because other than the academic and scientific sector where information is a scholarly commodity and the user is a serious information seeker whether a man or a women, the information need of an ordinary woman is seldom understood or appreciated. The status of women being a major subject of debate in India is dependent on several factors. However, in this paper I wish to address the diverse factors which will ultimately influence the information seeking behaviour of women:

(i) What information do women need? This concept of information need can be of different types. Need for traditional information and need for personal and other development oriented information. In the Indian context there are diverse factors which influence information need of women and their information seeking pattern. The social, economic and familial factors mostly influence women's behaviour in India.

(ii) In the social sector the following factors are of prime importance.

a) caste, b) class, c) urban, d) rural, e) literate/educated, f) illiterate/ uneducated

(iii) The economic sector faces another set of diversity:

a) employed, b) unemployed, c) employed in organized sector, d) employed in the unorganized sector, e) self employed, and f) house wife

(iv) India being a family oriented society, the women's lives are greatly influenced by the familial norms and hierarchy. This mainly accounts for women oriented issues such as health, parenting and child care, domestic requirements and house keeping, family planning, legal security, crime and safety, migration and mobility.

Hierarchical structure of the Indian society

Indian society has had a hierarchical structure as a part of the Hindu religion. The caste hierarchies have been spelt out with religious approval. Therefore, in a society divided on the basis of caste hierarchy, women in each caste generally hold the lowest position. However, historically the status of women has depended over a period of time on factors such as regional development, matriarchy, British penetration, women's education, social reforms and economic independence. However, a dichotomy prevails in the field of economic independence. The lower caste women have historically been economically independent in the real sense of the term. The 20th century saw changes in the socio-economic condition of women within the caste and class structure. Therefore, the diversity can be narrowed down to basically five categories of women while discussing their information needs:

a) Urban elite
b) Educated urban middleclass,
c) Educated rural elite,
d) Educated rural/semi urban middleclass,
e) Uneducated rural poor.

These categories of women have different types of information need and its use according to the social, economic and familial structure.

Urban educated elite

This group of women have specific information needs which encompass information regarding educational particulars, career and other counseling, legal rights and aid, self-awareness, high standards of consumerism, house keeping, recreation and culture, etc. These women are part of the higher rung of the socio-economic ladder and generally enjoy social and economic security.

Urban educated middleclass

The women of this class of Indian citizens are facing the maximum difficulties within the social system because they face the problems such as discrimination, sexism and violence. However, they strive within the traditional system to come up to a level which will help them to change their status. Though their main concern is the traditional womanly approaches to life, they have specific requirements for information on education and schooling, health, social security, discrimination and gender relations, childcare and family relationships, family planning and birth control, legal aid, house keeping and house hold maintenance and more. Women of this group often work in the organized sector at the middle level. The job opportunities availed of are mainly traditional in nature and usually those which are not likely to tilt the economic scenario of the familial hierarchical structure. In this group many women are home based workers or house wives which makes them invisible and their information needs inconsequential to many academic research. These women unfortunately face maximum social pressures which are often insurmountable. They face discrimination since birth, are victims of dowry problems and are constantly facing discrimination at all levels. They need the broadest spectrum of information concerning gender sensitization, legal awareness/aid/facilities, economic/employment opportunities, education and career orientations. These women need information support to break loose the gripping socio-economic and familial stereotypes.

Educated semi-urban/rural middleclass

Socio economic development has influenced the lives of the women residing on the periphery of the urban society i.e. the suburban areas and in forward-looking rural society. The women here face similar problems and discriminations faced by their urban middleclass counterparts but the grip of the double standards of a traditional society is much more. The young women are exposed to formal education mainly because education upto a level has better marriage prospect. Majority of these women are expected to follow all traditional norms of behaviour without challenging any of it. To get them out of that stupor exposure to information about their innumerable rights and opportunities will have to be given.

Educated rural elite

A large majority of Indians are still within the feudal structure of the village society. The village of the yester years has seen a very systematic growth of feudal families which were the elites in villages in different parts of India. These families are very highly educated and cultured in their breeding and many well-known men and women of India have come from this background. During and after the social reform movements in the 19th century and the uprising for India's independence in the early 20th century women of these families were actively involved in these activities. The information needs of these women were surely at par with their men though the caste structure and family hierarchy remained very rigid in spite of the liberalization process.

The educated rural elite had a very different information requirement from the rest of the rural society. Their women were gradually educated and sent to cities for education. They were involved in reformatory activities in the women's movement and in the Independence movement of India. Historically also even before the British or the colonial days and spreading of western education among women, the women of the rural elite often used information in a very systematic manner because the rural women looked up to these wives, mothers and daughters of elitist families as teachers and instructors and benevolent persons within the social structure. Therefore, the information requirement of women in the village society were often channelized through these elitist women. Unfortunately this very effective class of women is fast receding from the rural scenario because the younger generation of these families have migrated to the urban sector and have become visitors to the rural society.

Uneducated Rural Poor

In this category the caste and class structure get totally merged. The poor women in a village society are economically independent but they have hardly any time or ability to seek information. Whatever they learn is through oral wisdom of the family hierarchy. The family hierarchical structure again gives a very diverse picture in the family relationship of women. The eldest woman or the matriarch is the epitome of wisdom and all information is sought from her. Her information is also gathered from the previous generation. Therefore, generation after generation it is the oral information which is sought and given. Inter personal communication is most important and that generally happens within the family or within a community. The women of the rural poor do not enjoy economic security because most of them work in the unorganized sector i.e., the lowest rung in the economic ladder. Many of them have skills in rural craft and are part of the family activity. The wages and other facilities in the agricultural, forestry and other sectors are discriminatory and there is no fixed relationship between the employer and the employee. It is unlikely that the women of this group will make efforts to seek information outside their restricted boundaries.

The role of librarian and information professional

With such a diverse spectrum of information seeking environment it is very difficult to pin down the exact type of library or exact type of librarian needed to cater to information for all women of such a diverse social structure. However, in the Indian situation we need the following:

Well-developed modern library and information dissemination facilities

i) The role of librarian/information officer will call for a workable blend of a traditional librarian and electronic media savvy information generator and disseminator. Well-organized libraries are necessary in the academic sector, special libraries in scientific & research sector and government sector to cater to the needs of the scholarly, sophisticated and well-informed women. There is seldom any special requirement because the realm of multifarious activities undertaken by women of this group deal mainly with development and other spheres of national/regional goals.

Public libraries in the new information seeking environment

ii) Well equipped public libraries and information centers are essential support systems in the information environment for all types of urban and semi urban women specially those who are out of the formal employment and academic circles. A public librarian must be able to empathise with the hesitant and often confused women information seekers. He/she should be personally gender sensitized to be able to handle a new type of clientele which has so far been mainly dependent on traditional and family oriented information.

In many areas, public libraries will have to set up a special area exclusively for women because women of traditional background are not allowed to utilize facilities common to men and women. The libraries have to keep a broad spectrum of information sources to cater to information requirement for traditional womanly pursuits as well as education and career orientation, legal rights and aid, job opportunities etc.

Information/communication centre at the rural level

iii) The most challenging role of the library professional will be in the rural sector. The literacy level among women is very low and in many parts of India it is abysmal. The librarian will have to be a communicator and not a librarian in the traditional sense. He/she has to climb down from the ivory tower where literacy and formal education can be taken for granted. The rural women have economic role as well as traditional familial roles. The library-cum information/communication centre must be equipped with necessary information in different media i.e., printed material for the neo literates, audio visual and electronic material for those who are not comfortable with the written word. The information professional must be aware of the local needs and furnish necessary information in comprehensible language and content. Oral and visual communication will be the most important mode of information transfer. Physically, the centre must be easily approachable to women who may have the chance to visit. To a large majority, the required information may have to reach the clientele in different innovative repackaged forum which is within the comprehension level of women.

Right to Information

Right to information is of great interest and debate in all of South Asia. A detailed legislation on this issue which spells out instruction for implementation is the need of the hour. There have been efforts in all these countries to funnel information through governmental and non-governmental channels. Even a relevant bill was drafted in India entitled 'Freedom of Information Bill, 1997' but it has not been enacted as yet. In this debate, the information need of women as a special group should be spelt out. In all the countries of South Asia other than the problem of illiteracy the complex barrier of multiple languages and religious diversity make information generation, information repackaging and dissemination even more challenging, specially among women. Therefore, if Right to Information has to be fructified, the automatic corollary will be Information Management in the right perspective and in the right manner. The role of librarians is crucial in this new environment.

Need for Research

The urgent need to study the information needs and the information seeking behaviour of women of diverse situations and backgrounds has to be understood by academicians, activists as well as governmental and non-governmental organizations. National and international efforts have to be channelized in that direction without any more delay.

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Partnership with NGO's as a great opportunity for librarians for promotions of women's information needs in Croatia

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Croatian librarianship – new trends

Today in the Croatian librarian theory there are changes regarding the mission of our activity that even in the world's proportions have transformed from the traditionally marginalized profession to an active performer in the development of the modern society. As a country of the new democracy, Croatia is in the process of transition that has multiple consequences on the librarianship. First of all, the modern librarianship has become more and more a profession that bounds us to social and political participation, while libraries and our professional associations depend on the democratic changes. The question is whether the librarians are aware of the changes mentioned above and ready to change their attitude towards the work they do. Our professional associations, regional and national, are still traditionally organized. Also, public libraries, that are forced to quickly modernize the working conditions, base their offer on the well-established long- standing practice, and are not in favor of big changes in their routine. Everything mentioned resulted in the fact that the space for the new programs, like the "indiscrimination of women" or the "partnership with NGOs" is restricted, and the interest is at its beginning. Right now there are no specialized forums inside the librarian profession that would deal with the problems of the social responsibility of the librarians or the indiscrimination of women. The first progress happened in 1998[1], when the Committee for the free access to information was founded. Our work in the Committee raised the question of the position of women in

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[1] The committee has been founded at the annual conference of the Society, initialised by our female colleague, dr. Alka Horvat, then chosen to be the first president. The two-year program was based on informing the society about the problems of the librarian profession.

the Croatian librarianship[2]. Although in our profession there are more than 80% of women, the serious interest in the position of women is still not present. For now there is no critical mass among the female members of our association, so the forum in not yet possible, which means that the debates on the subject cannot be held on their own. The consciousness-raising is not improved by the fact that the top positions of the five university libraries are occupied by men, which is the case in many other public libraries as well. The fact is even more significant when we take into consideration that the large number of our female colleagues are involved in scientific researches. Many of them have a Masters' or Ph. Doctors' degree in librarian science, but in the competition with the male colleagues they are satisfied with the position of deputies or the managers of particular departments or projects.
We believe that in Croatia further development of the civil sector depends largely on the consciousness rising of the female librarians recognizing the problem of women. For now, apart from some solitary voices inside our profession, all the major activities come from outside, mostly from the female NGOs. Today there are over 60 of them in Croatia, with different aims, but each with the stressed female mission.

The position of women in Croatia

The idealization of the patriarchal culture of the Southern Slavic people, their customs, lives and traditional values such as moral, patriotism and heroism strengthened the position of women inside the particular social circle. The woman was once denoted as the sexual and natural being, the man was denoted to be the social being. The social spaces were divided in the same way; for women there was the family and the privacy, for men the politics, culture and public projects. But, with the beginning of the civil society women not only had to manage the housekeeping, but also to take care of their families. The interest for the fashion magazines grew.[3] It was the beginning of the first female information needs, different from the male needs. Women started more intensively to engage in literature and painting so the consciousness of the female way of understanding slowly started entering the society. If we observe Croatia as a part of the Mediterranean, we can see that the emphasized difference between the North and the South helps the different dynamics in maturing the interests for the female position in the society. For the Mediterranean people the "male" principle is emphasized, so the feminist movement started in Zagreb much before than in Dalmatia. The similar situation is present in other Mediterranean countries. The representatives of the women's NGOs, attending the 7th annual conference entitled: "Woman and Work in the Mediterranean" held in Italy in 1998, concluded that we, Mediterranean women, are confronted to the variety of problems, starting from the violence towards women, to the difficult working conditions[4]. This is just an additional reason for the Croatian feminist movement to consider the regional experience. Integration of women in the school system in Croatia moved slowly. At the University of Zagreb female students were allowed only to listen the lectures (1895), and their students' status was fully acknowledged in 1901. In 1904 a woman earned a doctor's degree, but the acceptance of women into different professions was not yet secured. The battle for women's rights started in 1920, led by prominent leaders of the women's organizations. University graduate women joined the net of the women's organizations and started working together on reforming the society and on achieving the right to vote. In summer 1927 the President of the *International Federation of University Women* encouraged the opening of the branch-office in Yugoslavia (1927), so our women's organizations joined the net of the international movement for women's rights. Since then the women's movement in Croatia passed through many phases, and the long-term engagement of our activists brought to the intensive development of the women's scene in Zagreb. With the disintegration of Yugoslavia and the change of the political system in 1991 the non-governmental sector has been strengthened. Along with the ecologists and the organizations dealing with the protection of human rights, women's organizations nowadays play the important role in the development of democratic society in Croatia.

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[2] For the promotion of our activities we have also published in the librarians' periodical an article dealing with the position of women and the women's information needs in Croatia
[3] Andrea Feldman: Twenty years without feminism in Croatia// Kruh i ruze, 10 (1998/99)
[4] Women and Work in the Mediterranean// IDOC – internazionale, 29.03. 1998.

Women's organizations and their influence on the development of women's information needs

From the beginning of the Yugoslav disintegration, especially during the war period, the women's organizations of the newly formed countries showed the need for the future cooperation. They created a net and the main goal was to provide the mutual informational exchange and create new partnerships. At the beginning the net was functioning through the *off line* partnership, such as participating in different initiatives and projects, but soon there was need for an *on line* communication. To make women as present as possible in media for faster experience exchange, on *Zamir net (For Peace.net)*, in August 1994, there was a conference list just for women. *Zamir/Women*[5] was the title of the conference, and the women had the opportunity to ask questions, make contacts etc. The languages on the net were: Croatian, Slovenian, Serbian, Bosnian, Albanian and Macedonian, which mean that all the women of ex-Yugoslavia had the opportunity to participate. Men could follow the themes and subjects, but they were obliged to respect the women's needs to communicate among themselves. Since the opening of the conference until 1995, 366 projects and announcements passed through the net. Since 1996 the net has still been used for the communication, discussions and creation of partnerships.

In the meantime, many women's organizations chose to tie their programs to the libraries, or to the bibliotherapic approach in treatment of the posttraumatic stress disorder (PTSD). In Split, the center of Dalmatia, the regional Women's Association that worked in refugee camps, decided to start small reading rooms[6] within the camps. The reading rooms were equipped with books and women and daily newspaper, and were assigned to women and children refugees, the camp inhabitants. At the beginning of 1997 the Librarians' society in Split and the mentioned Women's Association lobbied the local government and citizens and managed to found a library in the Home for retired persons. The Women's Association collects literature for women, and also organizes the bibliotherapic workshops for retired women. One of the most important projects was the starting of the *Women's College* and *Women's Information Center*. When the *Women's Information Center* was founded in 1992, the possibility of satisfying the women's information needs increased enormously. Since then it was possible to find all the texts, information and data regarding the problems of women in one place. In the *Women's Information Center* there is the first library exclusively for women that has over 1600 books, almost 300 magazines and a small video – collection of women's films.
I believe that the cooperation with the *Women's Information Center* presents a challenge to the librarians and librarian societies in Croatia. It is possible to start different partnerships, but for now only the interlibrary exchange functions completely.

Women's College was also founded in Zagreb, and has been the first to offer a chance to Croatian women for an alternative female education. Many young female students attend this college, although it has still not become a part the Split University. Since this kind of problem exists in other, more developed democratic countries, we do not consider it as an extremely difficult situation. *Women's College* and *Women's Information Center*, among other activities, also encourage the women's publishing industry, and until now have published a large number of works regarding the problem of the position of women in the society, written by both Croatian and foreign women writers. Soon after the foundation, *Women's Information Center* started publishing women's magazine *Kruh i ruze* (*Bread and Roses*), which is an important source of different information on the problem of the position of women. It is also an opportunity for many women, with different professional and individual interests, to find their own media space. The presence in the media is hardly obtained for women, and this magazine helped a lot.

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[5] Suncica Damjanovic: The development of e – mail in ex – Yugoslavia // Kruh i ruze, 07/1997
[6] Edita Bacic: Reading rooms or small libraries in refugee camps// Glasnik Drustva bibliotekara u Splitu, 03/1994

Conclusion

The activists of the women's NGOs encouraged women to educate more on the problem of their position in the society, and in that way to identify more easily their need for specific information. Women librarians gathered in Croatian professional associations are still at the beginning of recognizing this problem. I should say that we should advance when the specific number of women librarians recognizes librarianship as the profession that can make space for exchanging the information among women. For now we can follow the practice of our female colleagues that work in different women's information centers and enter as many partnerships as possible.

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2. Cyber feminism, Women's College Center, Zagreb, 1999
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L'impact du modèle FRBR sur les révisions à venir des ISBD : un défi pour la Section de Catalogage de l'IFLA

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Abstract :

Cet article énumère quelques-unes des réactions qu'a suscitées la publication du modèle FRBR parmi les professionnels du monde entier : propositions d'évolution du modèle, aspects pédagogiques, expériences dans le domaine de l'implémentation, autres réalisations s'inspirant du modèle. Dans un second temps il cherche à montrer l'apport potentiel du modèle FRBR dans la révision des ISBD, et ce dans le double contexte de l'interopérabilité visée entre données provenant des bibliothèques, des archives et des musées, et de la présence de plus en plus marquée des catalogues en ligne sur le Web.

Depuis 1997 il existe un cadre conceptuel précis et scientifiquement rigoureux qui est à même de servir de base à toute réflexion sur l'essence, les finalités et les modalités de l'activité de description bibliographique : il s'agit du modèle entité-relation FRBR ([FRBR, 1998]) de l'IFLA. La publication de ce modèle a naturellement suscité nombre de réactions, dans le monde des bibliothécaires bien sûr mais également à l'extérieur de celui-ci. Un rapide survol de quelques-unes de ces réactions depuis 4 ans peut nous permettre d'esquisser un bilan de l'impact du modèle de l'IFLA sur la réflexion bibliothéconomique mondiale, ainsi que sur son rôle potentiel dans la révision des ISBD, rendue nécessaire à la fois par des contraintes d'ordre économique et par l'évolution du contexte technologique de la production d'information. L'IFLA, en tant que créatrice du modèle FRBR, est à l'origine de ce mouvement de réflexion : il serait dommage qu'elle n'y participe pas et abandonne à d'autres sa responsabilité intellectuelle sur les usages qui seront faits de son modèle.

1. L'accueil réservé au modèle FRBR

1.1. À un niveau théorique

1.1.1. Propositions d'amendements au modèle

1.1.1.1. Généralités

Structure du modèle : en juin 2000, les participants à l'atelier FRBR de la Conférence annuelle du Groupe européen d'automatisation des bibliothèques (ELAG)[1] ont souhaité voir évoluer le modèle FRBR vers une structure orientée objet.

Aspects du modèle à approfondir : Michael Heaney (par ailleurs auteur, avant même la publication des FRBR, d'un modèle orienté objet pour le catalogage ([Heaney, 1995]), qui n'a pas rencontré l'écho qu'il méritait, et dont les conclusions sont finalement assez proches de celles des FRBR) et Carl Lagoze (qui est par ailleurs un des auteurs du modèle ABC [Lagoze, 2000]) regrettent tous deux que les notions connexes de temps, temporalité, événement, modification, etc., ne soient pas plus développées dans le modèle.

1.1.1.2. " Tâches utilisateur "

Aux 4 " tâches utilisateur " énumérées dans les FRBR, le CC:DA Task Force on Metadata souhaiterait en voir ajouter une cinquième : " gérer " ([SDLA 1999]), et l'Associazione italiana biblioteche (AIB) ([AIB, 1999]) ainsi qu'Elaine Svenonius ([Svenonius, 2000]) une sixième : " naviguer " (dans le catalogue).

1.1.1.3. Entités

Martha M. Yee ([Yee, 1997]) et l'atelier FRBR de la Conférence annuelle ELAG de 1999 ([Holm, 1999]) ont, indépendamment l'un de l'autre, souhaité la définition d'une entité supplémentaire dans le Groupe 1 des entités du modèle, au-dessus de l'entité *Œuvre*, afin de préciser les relations entre une œuvre-mère et toutes les œuvres qui en sont dérivées. Cette entité s'appellerait " Super-œuvre " *(Superwork)* pour Martha M. Yee et simplement " Entité-chapeau " *(Top entity)* pour ELAG. Barbara B. Tillett a démontré ([Yee-Tillett, 2000]) que l'existence de cette entité n'était nullement nécessaire à l'architecture du modèle, et l'année suivante ELAG a retiré cette proposition, sur la base des explications de Barbara B. Tillett. Ce fait montre que l'IFLA a un rôle pédagogique à jouer auprès des professionnels du monde entier.

Par ailleurs, l'AIB regrette que la hiérarchie entre les différents types d'*expressions* pour des *œuvres* musicales ne soit pas plus précisément définie, et souhaiterait que l'entité *expression* fût éclatée en 4 entités distinctes qui rendraient mieux compte des subtilités de la création musicale : partition originale, modifications d'ordre purement éditorial (mise au propre, édition critique…), arrangements (transcriptions, orchestrations…), interprétation. L'atelier FRBR d'ELAG ne va pas aussi loin et a seulement souhaité en 1999 que soient différenciées les *expressions* d'*œuvres* musicales sous forme notée et les *interprétations* de ces *expressions*.

1.1.1.5. Terminologie

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[1] Les actes de la Conférence ELAG 2000 seront publiés dans le 3e trimestre 2001.

T. A. Bakhtourina ([Bahturina, 1999]) a souligné la difficulté qu'il y avait à traduire en russe la terminologie propre au modèle FRBR et la trouve contestable déjà dans l'original anglais. Plus généralement, ce type de reproche montre qu'il est nécessaire, au niveau international, de se mettre d'accord sur une terminologie technique de base (*cf.* les travaux de Monika Münnich au sein de la Section de catalogage de l'IFLA), et de veiller à la " traduisibilité " de cette terminologie, sinon dans toutes les langues du monde — entreprise qu'il serait impossible de mener à bien — du moins dans les " principales " (selon quels critères ?) langues en usage dans le monde. À cet égard, l'obligation de traduire en français les normes ISO afin qu'elles puissent être votées n'est pas suffisante : l'anglais et le français partagent une structure syntaxique et un fonds lexical communs trop importants pour que cet exercice présente un intérêt conceptuel et linguistique réel : il serait bon de traduire ces normes non seulement en français, mais également dans au moins une langue d'Asie et au moins une langue d'Afrique. Traduire les normes ISO en russe, en chinois, en japonais et en arabe avant de les voter permettrait de mieux s'assurer de leur cohérence conceptuelle, terminologique et phraséologique, ainsi, dans la mesure où ce terme a un sens, que de " l'universalité " des concepts qu'elles véhiculent.

1.1.2. Aspects pédagogiques

Kirsten Strunck a déjà dressé pour l'IFLA en 1999 un bilan de l'expérience pédagogique qui a été menée au Danemark ([Strunck, 1999]), et il en ressort que le point sur lequel les étudiants danois en bibliothéconomie achoppent le plus réside dans l'articulation entre *œuvre* et *expression*. Pour ma part, chaque fois que je présente le modèle FRBR à des collègues français, je rencontre exactement la même difficulté au même endroit. Il semble donc que ce soit là vraiment l'aspect le plus délicat du modèle, le plus difficile à transmettre. Il existe par ailleurs d'autres expériences pédagogiques dans d'autres pays (en Italie, avec Mauro Guerrini et Paul Gabriele Watson ; en Norvège, aux USA, etc.) : il serait utile de mettre en commun l'expérience acquise dans tous ces pays, afin de tirer parti de toutes ces différentes démarches de formation et de tenter de résoudre ensemble les problèmes pédagogiques récurrents qui se rencontrent partout.

1.2. À un niveau pratique

1.2.1 Implémentation du modèle

1.2.1.1. Réalisations

Les pays scandinaves et la Finlande ont déjà commencé à développer des bases de données qui reposent en tout ou en partie sur le modèle FRBR : MARC/FRBR en Norvège et en Finlande, VisualCat au Danemark. Là encore, il serait extrêmement profitable de mettre en commun l'expérience acquise dans ce domaine.

1.2.1.2. Projets

D'autres projets sont à l'étude.

L'atelier FRBR d'ELAG a l'intention d'élaborer une base de données qui serait entièrement construite sur les FRBR et qui ferait appel au langage XML. Contrairement aux précédentes, cette base de données ne viserait pas à décrire un fonds matériel existant mais serait exclusivement expérimentale : il s'agit d'explorer tous les bénéfices potentiels des FRBR, y compris dans les éléments de données qui ne sont pas actuellement introduits dans les notices bibliographiques " traditionnelles ".

Par ailleurs, l'Australie a lancé un projet de Portail électronique de la littérature australienne *(Australian Literature Electronic Gateway,* ALEG) qui sera essentiellement fondé sur les FRBR, avec en outre une utilisation de la structure des " Topic Maps ".

1.2.2. Utilisations connexes

1.2.2.1. Influence sur d'autres modèles conceptuels de données

Le modèle élaboré par Peter C. Weinstein pour la bibliothèque numérique de l'Université du Michigan (UMDL) est fondé sur les FRBR. Il comprend cependant une entité de plus et les noms des entités ont été transformés pour répondre aux besoins spécifiques de l'UMDL ([Weinstein, 1998]).

Le modèle <in*d*ecs> (de l'initiative *Interoperability of Data in E-Commerce Systems)* a de nombreux points communs avec les FRBR. On notera cependant une différence importante entre les deux modèles : il existe une entité dénommée *Expression* dans chacun des deux modèles, mais dans <in*d*ecs> elle ne s'applique qu'aux seuls enregistrements d'interprétations.

Le modèle ABC, élaboré par le Projet *Harmony* (Royaume-Uni, États-Unis, Australie), vise à l'interopérabilité de tous les modèles conceptuels de données qui ont été conçus dans le domaine de la documentation, et intègre donc à cette fin le modèle FRBR.

1.2.2.2. Normes ISO sur les numérotations internationales

Depuis la parution des FRBR, tous les groupes de travail de l'ISO qui sont en train d'élaborer une norme d'identificateur numérique citent le modèle de l'IFLA dans leur bibliographie. Mais en réalité, l'exactitude et la cohérence avec lesquelles ces normes utilisent la terminologie et la structure même des FRBR varient énormément d'un identificateur à l'autre. L'ISAN *(International Standard Audio-visual Work Identifier)* est défini de manière à s'appliquer précisément aux *Œuvres* audiovisuelles, tandis que l'ISWC *(International Standard Musical Work Identifier)* s'applique uniquement à des *Expressions* musicales sous forme de notation (et, dans le cas de la musique électro-acoustique seulement, aux phénomènes sonores qui résultent du processus créatif du compositeur). Le modèle sous-jacent à la définition de l'ISTC *(International Standard Textual Work Code)* est plus proche du modèle <in*d*ecs> que du modèle FRBR, mais dans le contexte des FRBR l'ISTC s'applique plutôt à des *Expressions* qu'à des *Œuvres* textuelles.

1.2.2.3. Norme ISO 8459 sur les éléments de données

Lors du Congrès ISO 2000 à Munich, Poul Henrik Jørgensen (Centre bibliographique danois) a proposé de s'appuyer sur les FRBR pour définir une structure commune entre les 5 parties de la norme ISO 8459 sur les éléments de données.

1.3. Conclusion de la première partie

Il existe un intérêt évident, bien que très variable selon les pays (les Pays scandinaves, l'Italie et l'Australie sont très en avance sur tous les autres pays) pour les FRBR ; par ailleurs, les FRBR sont utilisés dans le cadre de la formation initiale, ce qui implique que dans les années à venir de plus en plus de jeunes bibliothécaires seront familiarisés avec le modèle de l'IFLA. Ces deux faits constituent un atout majeur pour que les FRBR jouent un rôle primordial dans les futures révisions de l'ISBD.

2. Le rôle potentiel des FRBR dans la révision des ISBD

2.1. L'histoire est-elle cyclique ?

Il est bien sûr toujours un peu dangereux de prétendre prédire l'avenir en tirant des " lois " des événements passés ; on est cependant frappé par l'analogie des situations : les Principes de Paris (1961) ont débouché sur la création des premiers ISBD, qui ont eux-mêmes débouché sur l'élaboration de codes de catalogage spécifiques, pour lesquels ont été créés divers formats MARC qui permettent de faire fonctionner divers OPAC spécifiques. Dans leur dualité même (ils sont d'une nouveauté révolutionnaire et en même temps ils s'appuient sur une tradition solidement établie), les FRBR peuvent être considérés comme l'équivalent actuel de ce qu'ont été jadis les Principes de Paris. Partant, ne pourrait-on pas imaginer qu'ils puissent donner lieu à de nouveaux ISBD, qui donneraient lieu à de nouveaux codes de catalogage, pour lesquels on créerait de nouveaux formats (fondés sur XML ?) qui permettraient d'élaborer de nouveaux OPAC ?

Les impératifs économiques et la tendance naturelle qu'a l'être humain à résister aux changements trop profonds et trop brutaux font qu'il ne saurait être question pour le moment que de " réviser " les ISBD. Cette révision a d'ailleurs déjà commencé.

2.2. Portée de la révision actuelle des ISBD

La révision actuelle des ISBD se fonde uniquement sur les conclusions du chapitre 7 du *Rapport final* sur les FRBR. Elle ne débouche donc que sur des changements assez minimes : elle rend " optionnels " certains éléments de données dont la présence était " obligatoire " dans la version antérieure des ISBD.

2.3. Apport potentiel des FRBR dans une révision plus poussée des ISBD

2.3.1. La notion d'*Œuvre*

Les FRBR mettent nettement l'accent sur la notion d'*Œuvre* plus que ce n'était le cas auparavant, et plusieurs commentateurs (telle Teresa Grimaldi [Grimaldi, 2000]) l'ont souligné. Une future version des ISBD recommandera-t-elle de traiter de manière systématique et cohérente les *œuvres* et les *expressions* dans des notices distinctes de celles qui décrivent les *manifestations ?*

2.3.2. Éclatement de la notice bibliographique " traditionnelle " en " unités discrètes d'information "

Il arrive fréquemment — même si ce n'est pas dans 100 % des cas — qu'un document se compose de plusieurs " sous-documents ", dont l'autonomie potentielle (et parfois réelle) est totalement niée par nos codes de catalogage actuels, parce que ceux-ci ne se situent qu'au niveau de la *manifestation.* Prenons un cas relativement simple : celui d'un texte d'un auteur A, publié avec une préface d'un auteur B, et des illustrations d'un illustrateur. Dans nos codes de catalogage actuels, nous considérons — non sans un certain arbitraire — que ce document est intéressant avant tout pour le texte de l'auteur A, et tout le reste est jugé secondaire. Nous créons une seule notice bibliographique, " aplatie ", avec un " accès principal ", une *" main entry ",* au nom de l'auteur A. Des " accès secondaires " permettent de retrouver la contribution de l'auteur B et celle de l'illustrateur à ce document, mais sans reconnaître l'autonomie dont ces contributions ont pu jouir avant ou depuis la publication du document.

Si les ISBD " révisés " recommandaient de considérer chacun de ces " sous-documents " comme une *œuvre* à part entière (qui, comme telle, mérite d'avoir une *" main entry "* dans sa propre catégorie), et d'affecter à chacune de ces *œuvres* les " relations structurelles " stipulées par les FRBR *(Work → Expression → Manifestation → Item),* il serait possible d'avoir, non pas une seule notice " aplatie ", mais trois unités discrètes d'information pour la préface, le texte et les illustrations, qui se trouveraient être réunies dans le contexte d'une publication donnée, mais qui permettraient également d'identifier la préface en tant que telle si, par exemple, un fonds d'archives en possède le manuscrit original, ou si elle est rééditée sans le texte auquel elle se réfère (comme la préface de Stéphane Mallarmé pour *Vathek* de William Beckford), et d'identifier les illustrations en tant que telles si, par exemple, elles ont préexisté au texte, ou si elles sont exposées dans un musée.

En dehors des collaborateurs, il n'y a donc en fait pas " d'auteurs secondaires ". Il n'y a que des auteurs principaux, mais dont la responsabilité intellectuelle s'exerce sur des *œuvres* jugées " secondaires " dans un contexte donné, mais qui peuvent devenir " principales " dans un autre contexte, ou bien sur des *expressions* (cas des traducteurs). Nos codes de catalogage devraient être assez souples pour permettre de passer aisément d'un contexte à un autre, en cessant de considérer *a priori* que le " livre " est forcément prédominant sur le " non-livre ", que les mots sont forcément prédominants sur les images, que la musique notée est forcément prédominante sur les paroles ou le livret ou sur l'interprétation de la musique, que le texte théâtral est forcément prédominant sur la mise en scène, etc. — ce ne sont là que les résultats de notre paresse intellectuelle, de notre incapacité à percevoir la réalité telle qu'elle est, et de l'habitude que nous avons de ne travailler que sur un seul type de catalogue à la fois.

Cette plus grande précision dans le traitement catalographique s'avérerait extrêmement utile dans certains projets de numérisation partielle de documents. Par exemple, à la Bibliothèque nationale de France, le Département de la Musique a pour projet de numériser les couvertures de partitions de musique pour piano du 19^{e} siècle, dont l'importance dans l'histoire des arts graphiques n'a été mise en lumière que depuis peu (et est peut-être même supérieure à celle de ces partitions elles-mêmes dans l'histoire de la musique…).

2.3.3. FRBR, ISBD et OPAC

L'AIB a souligné le fait que l'emploi du terme " naviguer " dans le *Rapport final* sur les FRBR impliquait qu'un catalogue était désormais envisagé d'emblée comme informatisé. Il est possible d'en tirer plusieurs conclusions — ou pour mieux dire, plusieurs interrogations :

— Les ISBD révisés devraient-ils inclure des spécifications concernant les OPAC ?

— Les ISBD révisés devraient-ils prendre en compte une structuration supérieure au niveau de la notice, telle que les " super-notices " de Rahmatollah Fattahi ?

— Les ISBD révisés devraient-ils inclure des spécifications concernant l'accès aux notices bibliographiques sur le Web ?

2.4. Conclusion de la deuxième partie

Cette dernière question débouche sur celle de l'intégration des méthodes de description de gisements d'information hétérogènes. Actuellement sur le Web — et cette tendance ira en s'amplifiant à l'avenir — on trouve toutes sortes de catalogues (bibliothèques, archives, musées) et le Profil de Bath vise à les rendre tous consultables en même temps. Est-il prématuré de parler de procéder à une fusion, ou du moins une interopérabilité, avec d'autres modèles, d'autres types de descriptions documentaires, pour aboutir, non pas simplement à un " nouvel ISBD ", mais à un concept nouveau (et qui, logiquement, aurait dû être en fait le plus ancien de tous), celui d'une " Description documentaire internationale normalisée " (" ISDD ") ? Comme le disait Eeva Murtomaa l'an passé ([Murtomaa, 2000]), " Serait-ce le début d'une belle amitié " non seulement entre bibliothèques et archives, mais aussi avec les musées ? À ce point de vue, le modèle ABC est très certainement celui dont nous pouvons attendre le plus.

3. Conclusions générales

Avant que le modèle ABC (ou un autre) ne rapproche nos catalogues de ceux des archives et des musées — il y faudra certainement plusieurs années, voire plusieurs décennies —, la Section de catalogage de l'IFLA a encore un rôle primordial à jouer sur les FRBR :

— Assurer la maintenance du modèle (en examinant et en évaluant les demandes portant sur l'évolutivité du modèle, et en statuant — acceptation, rejet motivé — sur ces demandes) ;

— Se maintenir informée des problèmes (mais aussi des succès, bien sûr) rencontrés par les organismes qui développent des bases de données entièrement ou partiellement fondées sur les FRBR ;

— Assurer la diffusion et la vulgarisation du modèle (en encourageant des actions de formation et en s'informant sur celles qui existent ; en veillant à la cohérence des normes qui s'appuient sur les FRBR — tâche que Tom Delsey ([Delsey, 2001]) a déjà commencé à entreprendre pour les normes ISO sur les numérotations internationales) ;

— Préparer l'avenir à plus long terme en préparant la fusion ou tout au moins l'interopérabilité des FRBR avec d'autres modèles.

Elena Balzardi a dit lors d'un congrès que la Bibliothèque nationale suisse " n'envisageait pas pour le moment d'introduire les FRBR dans son catalogue " mais qu'elle " devait observer attentivement quelles sont les tendances à un niveau mondial, afin d'être en mesure de réagir juste au bon moment ". Cette citation doit être méditée à la fois comme un défi et comme un encouragement : la balle est dans notre camp, et nous ne devons pas décevoir les attentes suscitées par le modèle FRBR !

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The impact of the FRBR model on the future revisions of the ISBDs: a challenge for the IFA Section on Cataloguing

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Abstract:

This paper lists some of the reactions from professionals all over the world to the publication of FRBR: suggested changes, pedagogical issues, experiments in implementation, other achievements inspired by the model. Then it tries to show how FRBR could be used in the process of revising ISBDs, in the context of interoperability between data from libraries, archives and museums, and in the context of the increasing availability of catalogues from the Web.

Since 1997 there has been a precise and scientifically accurate conceptual framework which might serve as a basis for any reflection on the nature, purposes and processes of bibliographic description: IFLA's entity-relationship FRBR model ([FRBR, 1998]). Naturally enough, when this model was published, it aroused many reactions, from librarians of course but from other people as well. A quick glance at some of the reactions that have been expressed for 4 years may help us to draw a rough balance of the impact of the IFLA model on global thought in the field of library science, and on its potential role in the revision of ISBDs, a revision made necessary at the same time by economical constraints and by changes in the technological context of information production. IFLA, as the originator of the FRBR model, was at the starting point of this reflection: it would be sad, were IFLA not to take part in it and to leave in other people's hands its intellectual responsibility on how its own model will be used.

1. How the FRBR model was received

1.1. On a theoretical level

1.1.1. Proposals to amend the model

1.1.1.1. Generalities

Structure of the model: in June 2000, the attendants to the FRBR Workshop within ELAG's (European Library Automation Group) Annual Conference expressed their wish that the FRBR model should switch from entity-relationship to object-oriented[1].

Features of the model that need to be enhanced: Michael Heaney (who otherwise was the author, even before FRBR was published, of an object-oriented model for cataloguing ([Heaney, 1995]) which did not encounter the success it deserved and which eventually resulted in conclusions rather akin to FRBR) and Carl Lagoze (who otherwise is one of the originators of the ABC model [Lagoze, 2000]) regret that such notions as time, temporality, event, modification, etc., are not more thoroughly handled in the FRBR model.

1.1.1.2. User tasks

CC:DA Task Force on Metadata would like to add one more user task to the four ones that have been identified in FRBR: "manage" ([SDLA, 1999]). The Associazione italiana biblioteche (AIB) ([AIB, 1999]) and Elaine Svenonius ([Svenonius, 2000]) expressed the need for another additional user task: "navigate" (the catalogue).

1.1.1.3. Entities

Martha M. Yee ([Yee, 1997]) and the FRBR Workshop in ELAG Annual Conference of 1999 ([Holm, 1999]) independently expressed their wish that an additional entity had been defined in Group 1, above the *Work* entity, so as to make relationships between a parent work and all its derivative works more precise. Martha M. Yee called this entity *Superwork* and the ELAG Workshop called it just *"Top entity"*. Barbara B. Tillett has given a demonstration ([Yee-Tillett, 2000]) that this entity is in no way necessary in the structure of the model, and the following year ELAR withdrew this proposal, on the basis of Barbara B. Tillett's explanation. This proves that IFLA has a pedagogical role to play in direction of librarians in the whole world.

Besides, AIB regrets that the hierarchy of different kinds of *expressions* has not been defined in a more precise way, and they wish the *expression* entity were split into 4 distinct entities which would more accurately take into account the subtleties of musical creation: original scoring, merely editorial modifications (fair copy, critical edition...), arrangements (transcriptions, orchestrations...), performance. The ELAG FRBR Workshop does not go that far and simply wished in 1999 that notational forms of *expressions* of musical *works* and their *performances* were distinguished.

1.1.1.5. Terminology

T. A. Bakhturina ([Bahturina, 1999]) has stressed the difficulty of rendering into Russian the peculiar FRBR terminology, which she thinks questionable already in the English original. More generally speaking, this kind of reproach shows how necessary it is to reach some international consensus on basic technological terminology (*cf.* Monika Münnich's works within the IFLA Section on Cataloguing), and to strive to make this terminology as "translatable" as possible, if not in any language in the world — an impossible task — at least in the "main" (according to what criteria?) languages that are spoken in the world. In that respect, it is not enough that ISO standards should be translated into French so that they could be balloted: the English and French languages share too much common syntactical structure and lexical wealth for this exercise to be really useful at both conceptual and linguistic levels: it would be a good thing to have to translate these standards not only into French, but also into at least one Asian language and at least one African language. Translating ISO standards into Russian, Chinese, Japanese and Arabian before they are balloted would enhance their conceptual and terminological consistency and their phraseology, and it would also ensure, inasmuch as this term makes sense at all, that the concepts they convey are "universal".

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[1] The proceedings of the 2000 ELAG Seminar will be published at the end of 2001.

1.1.2. Pedagogical issues

Kirsten Strunck already presented IFLA in 1999 with an assessment of Denmark's pedagogical experience ([Strunck, 1999]). One of her conclusions was that the most difficult point for Danish students was the articulation between *work* and *expression.* As to me, every time I introduce the FRBR model to French colleagues, I have exactly the same problem at the very same moment. This seems therefore to be the trickiest feature in the model, the most difficult one to explain. There is besides some FRBR training in other countries as well (Italy: Mauro Guerrini, Paul Gabriele Watson; Norway, USA, etc.): it would be most useful to share the experience acquired in all of these countries so as to take advantage of all these training endeavors and to try to solve together recursive pedagogical problems which are encountered everywhere.

1.2. On a practical level

1.2.1 Model implementation

1.2.1.1. Achievements

Scandinavian countries and Finland have already begun to develop databases totally or partially relying on the FRBR model: MARC/FRBR in Norway and Finland, VisualCat in Denmark. It would be most useful to share the knowledge which has been acquired in this field too.

1.2.1.2. Projects

Some projects are still under consideration only.

Participants in the ELAG FRBR Workshop intend to develop a database entirely according to FRBR and using XML. In opposition to the latter projects, this database would not aim at a description of an actual collection, but would be experimental only: the point is to investigate all potential advantages from FRBR, including those data elements which are not currently introduced in "traditional" bibliographic records.

Australia has also launched the ALEG project (Australian Literature Electronic Gateway), which will be essentially based on FRBR, with an additional use of the "Topic Maps" structure.

1.2.2. "Side uses"

1.2.2.1. Other conceptual data models inspired by FRBR

The model Peter C. Weinstein developed for the University of Michigan Digital Library (UMDL) is based on FRBR. It includes nevertheless one additional entity and the names of entities have been changed in order to match UMDL's specific needs ([Weinstein, 1998]).

The <in*d*ecs> model (developed by the Interoperability of Data in E-Commerce Systems initiative) shares much in common with FRBR. However, an important difference should be noticed: in both models there is an entity named *Expression,* but in <in*d*ecs> it applies only to recorded performances.

The ABC model, developed by the Harmony Project (a joint project of United Kingdom, USA and Australia) aims at the interoperability of all the conceptual data models that have been designed in the field of documentation science, and it integrates therefore the FRBR model to that purpose.

1.2.2.2. ISO standards for international identification numbers

Since FRBR has been published, all the ISO working groups that are developing a numeric identifier standard mention the IFLA model in their bibliography. But actually, these standards use the terminology and the very structure of FRBR with great discrepancies in accurateness and consistency from an identifier to another. ISAN (International Standard Audio-visual Work Identifier) has been defined so as to precisely apply to audio-visual *Works*, whereas ISWC (International Standard Musical Work Identifier) only applies to musical *Expressions* in notated form (and, in computer music only, to sound phenomena resulting from a composer's creative process). The underlying model in the definition of ISTC (International Standard Textual Code) is closer to the <in*d*ecs> model than to the FRBR model, but in the context of FRBR one might say that ISTC rather applies to *Expressions* than to textual *Works*.

1.2.2.3. ISO standard 8459 on data elements

On the occasion of the 2000 ISO Congress in Munich, Poul Henrik Jørgensen (Danish Bibliographic Centre) proposed that a common structure for all of the five parts of the ISO standard 8459 on data elements should be defined in accordance with FRBR.

1.3. Conclusion of Section one

There is an obvious interest in FRBR, though it is very different from country to country (Scandinavian countries, Italy and Australia are very much in advance in comparison with all other countries); besides, FRBR is used in formal training, which implies that more and more young librarians will be acquainted in the years to come with the IFLA model. Both facts are in favor of FRBR's playing a crucial role in future revisions of ISBDs.

2. FRBR's potential role in the revision of ISBDs

2.1. Is history a cyclical phenomenon?

It is of course always a bit dangerous to claim one is soothsaying future events by drawing "laws" from the past; there is however some striking analogy in the facts: the Paris Principles (1961) resulted in the creation of the first ISBDs, which in turn resulted in the development of specific cataloguing codes, for which different MARC formats have been designed so that different specific OPACs might work. In the very duality of its nature (it is revolutionary new and at the same time it relies on a firmly established tradition), FRBR might be held as a current equivalent for what the Paris Principles were once. Would it not therefore be possible to think that it might result in new ISBDs, which in turn would result in new cataloguing codes, for which new (XML-based?) formats would be designed which would allow new OPACs to be developed?

Economical constraints and mankind's natural tendency to be reluctant to changes when they are too profound and too sudden are some reasons why the only possible thing at the moment is to "revise" ISBDs. Which revision process actually has already begun.

2.2. Scope of the current revision of ISBDs

Current revision of the ISBDs only relies on conclusions from chapter 7 of the FRBR *Final report*. It therefore results only in very limited changes: it makes "optional" a number of data elements which were "mandatory" in the previous version of the ISBDs.

2.3. Potential contribution of FRBR to a more in-depth revision of ISBDs

2.3.1. Notion of *Work*

FRBR highlights the notion of *Work* more than it was formerly the case, and some commentators (among which Teresa Grimaldi) have stressed this fact. Will a future version of the ISBDs recommend to systematically and consistently handle *works* and *expressions* in records distinct from those describing *manifestations?*

2.3.2. Splitting the "traditional" bibliographic record into "information discrete units"

It often happens — even though not in all cases — that a document consists in several "subdocuments", the potential (sometimes actual) autonomy of which is totally denied by current cataloguing codes, because they only deal with the *manifestation* level. Let's consider a relatively simple case: a text written by author A, published with a foreword by author B, and illustrations by an illustrator. In current cataloguing codes, we — somewhat arbitrarily — assume that such a document is of interest above all because of author A's text, and everything else in it is held secondary. We therefore create a single, "flat" bibliographic record, with author A's name as a "main entry". "Secondary entries" allow us to retrieve author B's and the illustrator's contributions to this document, but do not acknowledge the mere fact that these contributions may have existed by themselves before or since the document was published.

If "revised" ISBDs recommended that each of these "subdocuments" were held as a *work* per se (which, as such, deserves a "main entry" in its own category), and that the FRBR "structural relationships" *(Work → Expression → Manifestation → Item)* applied to each of these *works,* we might have, in lieu of a single "flat" record, three discrete information units for the foreword, the text and the illustrations, which would happen to be gathered in the context of a given publication, but which would also allow us to identify the foreword as such if, for instance, the original manuscript is located in a given archive collection, or if it is reissued without the text it refers to (as in the case of Stéphane Mallarmé's foreword to William Beckford's *Vathek),* and to identify the illustrations as such if, for instance, they preexisted the text, or if they are exhibited in a museum.

There are therefore no "secondary authors", except collaborators. There are only main authors, but their intellectual responsibility applies to *works* which are regarded as "secondary" in a given context and may become "main" in another context, or to *expressions* (as is the case for translators). Our cataloguing codes should be supple enough to allow us to shift easily from one context to the other, and should no longer regard "books" as inevitably prevailing on "non-books", nor words as inevitably prevailing on pictures, nor notated music as inevitably prevailing on lyrics or librettos or performances, nor dramatic texts as inevitably prevailing on staged productions, etc. — all this only results from our intellectual laziness, our failure to apprehend reality just as it is, and our habit of working on only one kind of catalogue at the same time.

This enhanced accuracy in catalographic description might prove extremely useful in some digitization projects where only parts of documents are involved. For instance, in Bibliothèque nationale de France, the Music Department has a project of having covers of 19th century piano scores digitized, the importance of which as to graphic arts history has only recently been highlighted (and might well be greater than the importance of the scores themselves as to music history…).

2.3.3. FRBR, ISBD and OPACs

AIB has stressed the fact that using the word "navigate" in the FRBR *Final Report* implied that a catalogue is regarded from now on as necessarily automated. We may draw several conclusions from this fact — or rather, several questions:

— Should revised ISBDs include requirements about OPACs?

— Should revised ISBDs take into account a structuring at a higher level than that of the record, such as Rahmatollah Fattahi's "super-records"?

— Should revised ISBDs include requirements about the availability of bibliographic records from the Web?

2.4. Conclusion of Section two

The latter question leads us to address the issue of integrating description methodologies for heterogeneous information resources. All kinds of catalogues (libraries, archives, museums) are currently to be found on the Web — and this tendency will be ever growing in the future — and the Bath Profile is intended to allow users to retrieve information on all of them at once. Is it too early to contemplate merging, or at least making the ISBDs interoperable with other types of document descriptions, so that there might be not just some kind of "new ISBD", but a new concept (which logically should have been the oldest one): the concept of an "ISDD", "International Standard Document Description"? As Eeva Murtomaa put it last year ([Murtomaa, 2000]), "Could this be the beginning of a beautiful friendship" not only between libraries and archives, but with museums as well? In this regard, the ABC model is surely the one we may expect the most from.

3. General conclusions

Before the ABC model (or any other one) brings the catalogues of libraries, archives and museums together — this task will need several years, maybe several decades —, the IFLA Section on Cataloguing still has a crucial role to play on FRBR:

- Maintain the model (by examining and assessing requests for changes in the model, and by accepting or rejecting them);
- Keep informed about problems (and achievements as well, of course) of institutions who develop databases entirely or partially based on FRBR;
- Disseminate and popularize the model (by encouraging training initiatives and by getting information about what is being done; by ensuring consistency among those standards that rely on FRBR — a task which Tom Delsey ([Delsey, 2001]) has already begun to undertake for the ISO standards on international identifiers);
- Prepare the future on a longer term by preparing the merging or at least the interoperability of FRBR with other models.

On the occasion of a conference Elena Balzardi ([Balzardi, 2001]) has declared that the National Library of Switzerland "is not considering of introducing FRBR into their catalogue" but that they "must attentively watch what the global trends are, in order to react just at the right moment". This quotation should be thought upon as both a challenge and an encouragement: it's up to us, we should not disappoint expectancies aroused by the FRBR model!

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Progress on the Multilingual Dictionary of Cataloging Terms and Concepts

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Abstract:

Inspite of the existence of quite a few dictionaries of library terms there is a need for a new dictionary that covers the very specific terms and concepts of cataloging and the objects to be cataloged. The dictionary will comprise terms of "official" international documents esp. IFLA documents such as ISBDs, FRBR, GARR; Anglo-American international documents such as AACR, Dublin Core and machine-readable formats such as MARC21 and UNIMARC and national documents in comparison. The dictionary will have annotations and explanations in order to explain differences beyond the simple definitions in international and national use of terms. The source language will be English – according to the above mentioned documents - with as many target languages as possible. The dictionary will be created under the auspices of IFLA; the members – IFLA membership is not mandatory - will work on a voluntary basis; the future database should be freely accessible on IFLANET.

The dictionary is supposed to be a practical aid, not a linguistic instrument. It should provide a thorough clarification of cataloging issues to enable worldwide understanding of terms, other rule sets, and concepts. It should enable catalogers to contribute to international discussions on rule sets and help with providing wording for new concepts.

In my long career I have used or cataloged many dictionaries. Proposing a new multilingual dictionary myself still frightens me at times! But I am sure that a strong need exists for a dictionary in the special field of cataloging.

1 Necessity for another dictionary?

I would like to begin with the question, do we really need a new dictionary of this sort?

To answer this, I should give a few examples based on personal experiences:

- *International conferences* such as IFLA, OCLC (authority control), Toronto (AACR Revision), etc.

  Whenever I discuss conference papers with my German colleagues I have the feeling that a thorough understanding has been very difficult to achieve. Thdictionary by Eberhard Sauppe[1] certainly is of help, but whenever special fields with differences in rule sets or bibliographic 7 were involved there is no answer – indeed, there *cannot be* any answer in Sauppe.

- *REUSE*

  In the REUSE project[2] – a project of Göttingen State Library and OCLC with Dr. Barbara Tillett (LC) and me as consultants – the differences between the rules sets AACR and RAK-WB[3] were analyzed in order to make "re-using" each other‘s bibliographic data easier and less expensive. In this project we frequently had a hard time understanding each other! Some examples were terms like "differentiated headings," "multipart works", or "series".

- *AACR2r Translation into German[4] Project*

  Finally, this project confirmed and encouraged the desire to build a multilingual dictionary of cataloging. In this project, the glossary was first translated by a few colleagues, then a team of American, British, German, and Swiss librarians started the translation of the different chapters with revision by the others. We discussed quite a few translated words and phrases which enriched a so called *Translation Help* (see transparency 2), which I had developed during the project. We put the tables of contents for the chapters as standard translations on the internet; but when I started to translate the index in summer 2000 – looking up the *different* translations of the words in the translated chapters - all of us saw the priority for a common, standard, detailed vocabulary with explanations: a very lively discussion is still going on in our online listserv.

Given these and other experiences: YES - we do need this dictionary.

And we need this dictionary in many languages - as many as possible in order to integrate as many colleagues as possible in disscussions of cataloging rules and concepts worldwide.

2 Documents to be utilized

The IFLA Section of Cataloging agreed that the dictionary should only comprise words from international and national "official documents, such as"

- **ISBDs** (*International Standard Bibliographical Description*)
- **FRBR** (*Functional Requirements for Bibliographic Records*[5])
- **GARR** (*Guidelines for Authority Records and References*[6])

It has to be discussed – especially in IFLA's Section on Cataloguing – if other IFLA documents are to be included.

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[1] Sauppe, Eberhard: Dictionary of Librarianship – Wörterbuch des Bibliothekswesens. 2nd ed., Saur 1996

[2] URL: http://www.oclc.org/oclc/cataloging/reuse_project/index.htm

[3] Regeln für die alphabetische Katalogisierung – in wissenschaftlichen Bibliotheken. 2. überarb. Ausg. Deutsches Bibliotheksinstitut, Berlin 1993.

[4] URL: http://lcweb.loc.gov/loc/german/AACR2/AACR2translation.html

[5] Saur 1998 – URL: http://ifla.inist.fr/V/saur.htm#UBCIMnew

[6] Saur 2001 - so far not on IFLANET

- **AACR - National rules in comparison**
- **Dublin Core (DC)**

  The Dublin Core Metadata scheme introduced many new "terms" that now require "official" translations, too.

- **Machine-Readable Bibliographic Communication Formats**

  MARC 21 and UNIMARC as basis

  There is still a question about bibliographic formats. Actually, I am convinced that machine-readable formats should be included. Catalogers are used to speaking in "tags" at least as often, if not more frequently, than referring to cataloging rules or ISBD areas of description.

  I recommend that terms found in the MARC 21 format and the UNIMARC format become the base list for this part of the vocabulary. National formats (as in Germany: MAB[7]) should become the translation basis, as far as applicable. Explanations should be included if applications are different.

3 Selection of words / phrases

The selections of words or phrases is another discussion point:

There is no doubt that all words and phrases concerning description and entries ("title proper", "date of edition", "accompanying material", "entered subordinately" - to mention only a few) should be included in the dictionary. But what about the objects catalogers have to describe or technical terms of the computer or film industries used in bibliographic description, or what about the terms used in controlled access forms of names, such as designations of leaders of foreign countries, complicated legislative bodies and designations?

I think these phrases/concepts have to be included, because the existing rules (above all AACR) prescribe how the cataloger has to handle these. Especially in comparing national rule sets, these materials, terms, and concepts must be defined and understood.

See TRANSPARENCY 1 with a list of words relating to cataloging description and entry words and objects to be cataloged.

4 Annotations / explanations

4.1 Examples for different philosophy in national rules and/or different handling of formats

I would like to present some examples:

- **Collection** – one of many examples for translation variations between AACR and RAK: collection means "Sammlung" - a collection of two or more works **by one author**

  but also "Sammelwerk" - a collection of two or more works **by different authors.**

- **Multipart items and Multi-volume works**[8] - an example for differences in rule sets and bibliographic formats:

  Within Anglo-American cataloging, there are several options for handling works that contain other works, the whole-part concept, regardless of whether presented physically as one or more volumes, and there are rules for describing works issued in several physical parts (whether containing a single or multiple works). The rules provide several options for cataloging such materials:

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[7] Maschinelles Austauschformat für Bibliotheken. 2. Aufl. 1996, Die Deutsche Bibliothek

[8] URLs: http://www.biblio.tu-bs.de/allegro/formate/reusep.htm and http://www.oclc.org/oclc/cataloging/reuse_project/english_summary.htm

1. by cataloging only the whole work - *usually when the separate physical parts have no variations in titles and/or contain no other "works" – showing the multiple volumes in the physical description (MARC 21 tag 300$a),*
2. by cataloging the whole work and including a contents note (MARC 21 tag 505) to identify the parts (with or without corresponding added entries (MARC 21 tags 7XX)) – *usually for a single volume containing multiple works or a multi-volume set with multiple works*,
3. by cataloging the whole (or creating just an authority record for the whole, as in the case for some series) plus separate records for the individual parts (analytics) linked to the "whole" through either a series statement (MARC 21 tag 4XX) or an "In analytic" note – *usually for parts of a monographic series*, or
4. by using a multilevel description as desribed in AACR2, rule 13.6 - *usually for things like manuscript collections*:

   In this latter rule, AACR2 suggests to "divide the descriptive information into two or more levels ... "

   but

   - MARC 21 provides for all of these options;
   - UKMARC has the added option beyond the options in MARC 21 of using a special title field tag for subordinate works when described within one bibliographic record;
   - MAB, the German exchange format, uses different records for the item as a whole and for each of the volumes - as we see below:

The structure of multi-volume works in German rules is divided into a

- ***Record for the collective title,*** the item as a whole with the relevant bibliographic statements,

  as author / corporate body (links to authority files):

  title proper / statement of responsibility. - publ. place : publisher and notes etc.

  and

- ***Records for each volume*** with the bibliographic statements relating to the volume

  authors / corp. bodies (links to authority files):

  6title proper / statement of responsibility. - edition statement. - publication year. - physical description. - collective title ; volume (***and*** *upward link to collective title record by ID-Nr)*

Volume records are also made if the volume has no distinctive title.

- **Conferences of corporate bodies**

The "conference example" is a typical case of non-matching entities within corporate bodies.

In AACR a conference of a corporate body can be a subordinate entry under corporate body (the purpose of this is to collocate the conference publications in large files):

[heading] International Labor Organisation. European Regional Conference (2nd : 1968 : Geneva, Switzerland)

[title] Second European Regional Conference ...

In RAK there is no subordination, these conferences are publications of the body itself:

[heading] International Labor Organisation

[title] Second European Regional Conference ...

4.2 Language of definitions and explanations

It should be discussed where and how the definitions/explanations/annotations are presented in the multilingual dictionary:

Definitions from the ISBDs, FRBR, AACR, Dublin Core are adopted from the English source into the English base list part of the dictionary (see 6). The explanation of the differences or difficulties in national concepts should be indicated in the English section and be explained in the respective national fields. These explanations should be made in the respective language as well as in English. I am not sure how detailed the explanations/annotations should be. We will have to discuss this on the lists.

4.3 Source book notations

I consider a source book notation very important. There are differences between AACR, ISBD, FRBR, Dublin Core, and the communication formats, and it is helpful to indicate the source. In case of matching vocabulary (as in AACR and ISBD), two [and] or more sources may be given.

5 No grammatical / linguistic terms and explanations

The dictionary team has to decide if the dictionary is "simply" a cataloger's tool or a sophisticated linguistic instrument which will require a considerable amount of additional linguistic input (which I certainly believe that most of my colleagues are able to provide). I think our goal is not a linguistic tool and that's why I propose to include neither gender, nor flexion or grammar specialties, nor pronunciation.

The dictionary should rather be a practical aid for librarians, which includes both aids to understanding other rule sets and aids to formulating new/other concepts.

I think that all members of IFLA Section on Cataloguing would like the idea that as many national ideas as possible could be included in any future international set of rules – partly with the help of this newly created tool.

6 Input / Database

6.1 Input

I am very happy to announce that Dr. Gerhard Risthuis from Amsterdam University will take care of the technical part. He proposes that the input can be made with a word processor (with the UNICODE - UTF-9 - encoding). The input should be a tagged text file. The file should comprise the following tags:

For the source language - which is English:

the *entry word* (the word or phrase that forms an entry), *the source, definition and source of definition* (if there are different source definitions) - if necessary an explanation, the *definition(s); reference to related terms, reference to synonyms.*

For each target language:

the *translated entry word, the source, translated definition and source* (if there are [more] several), *explanations/annotations* if the translated terms have different meanings in the national rule set or format; *reference to related terms, synonyms* - if they match words of the source language.

6.2 Database

The final decision which database will be chosen will be made by Dr. Risthuis and the Chair of the Section on Cataloging, Dr. Barbara Tillett. There are several concepts in discussion so far.

The database should be free of charge for IFLA members – or possibly made available for purchase at low cost. The database should be freely accessible on IFLANET.

It can be discussed whether national (English and target language) paper editions should be created.

7 National responsibilities and communication

There should be one to three persons responsible in a country or language area. At least one of these colleagues should be an IFLA member, but this is not mandatory. The colleagues should be catalogers or at least have very detailed knowledge of cataloging rules and bibliographic formats.

It goes without saying that this work will be carried out on a voluntary basis under the auspices of IFLA.

We will create e-mail discussion groups with cataloging experts who have a fairly good knowledge of English in order to achieve a reliable vocabulary and vocabulary structure. I actually propose:

- One common list for the persons responsible as a means of communication about such things as which words or phrases should be accepted for the English base list - a *Source Discussion List.*
- A "dual" group of lists: one for each target language area. Participation of Anglo-American colleagues with knowledge of the target language would be very helpful.

  As for the English / German part, I will ask some of the American colleagues of the AACR translation team to participate in this IFLA dictionary. These dual national lists could provide communication for the "official" translation of the target language. It would also be necessary to discuss national rule idiosyncracies in comparison to AACR2r (ISBD's, etc.) to introduce annotations and explanations.

8 Conclusions and next steps

To summarize: the new IFLA multilingual dictionary should be a practical aid. It should provide a thorough clarification of cataloging issues to enable worldwide understanding of terms, other rule sets, and concepts. It should enable catalogers to contribute to international discussions on rule sets and help with formulating new concepts.

So far we have only spoken of descriptive cataloging. I could well imagine that in a second phase subject cataloging terms and concepts could be included. But the first phase should be well underway before we integrate another large area of problems.

Next steps:

I hope to address all IFLA colleagues who are interested in participation during this IFLA General Conference. These colleagues could address further specialists in their countries.

A realistic start date for the working stage could be spring 2002 - to my mind. By then the German AACR Translation Project[9] will hopefully be finished and I think the input file could be ready as well by this time. I have asked Maria Witt - the Section Secretary - to establish an IFLA listserv: a source list and general discussion list that could include technical aspects such as tagging etc.

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[9] for the newest edition: http://lcweb.loc.gov/loc/german/AACR2/glossaries/transhelp.htm

The first input of the source language and the target language German could be the Translation Help I constructed with many colleagues during the AACR translation. I know the Slovenian colleagues have made a multilingual dictionary of ISBD-terms. This could also be a wonderful base list - I am sure they will permit us to do so. There are several other older national translation projects that could be included as well.

I do hope we can announce the start of the input in Glasgow.

Thank you

Monika Münnich, University Library of Heidelberg, Germany

for the IFLA Section on Cataloging

Transparenca 1 - **Selection of Words and phrases**

Cataloging techniques	*Objects to be cataloged*
access points	**acoustic sound recordings**
analytic added entry	**armed services**
bibliographic citations	**ballad opera**
bound with	**bill**
cataloging agency	**cartridge / chip cartridge**
chief source of information	**close score**
collation	**complainant**
compiler	**computer optical cards**
date area	**dubbed motion pictures**
early cartographic material	**ecclesiastical principality**
entry element	**edge track**
explanatory notes	**esquire**
family name	**film loops**
function of publisher	**fraternal order**
generic term	**groove characteristics**
hyphenated	**hereditary rulers**
illustrative matter	**impeachment**

initial article	indictments
joint pseudonyms	jurisdiction arbitral
level of description	laws governing one jurisdiction
multilevel description	military court
name of publisher	newscasts
order of elements	ordinary of the Mass
punctuation	Pali canon
reference source	reel-to-reel tapes
series statement	sees
spacing	stands of globes
terms of availibility	tosefta
vernacular	Vishnu
works of mixed responsibility	woodwind quartets

TRANSPARENCY 2 **Examples from the Translation Help**

Translation Help for AACR2 translation project

A (4/08)

English Term	**German Term**	**AACR Soource**
abbreviation	Abkürzung	index, App. B, uö.
abridgement abridgements	Kürzung Kurzfassung	Index, 1.1E3, 1.4D2 ua 21.12
access (manuscr. + electr. res.) restriction of	Zugang (zu Handschr.), Zugriff auf elektr. R. Zugangsbeschränkung.	index, 4.7B14, 1.7B20, 9.7B20
access points	Eintragungsstellen	21, App. D
accession	Neuerwerbung	index: inclus. dates ...
accompanying material *s.a.* supplementary m.	Begleitmaterial	index, uö.
according to (*s.a.* order of preference)	gemäß ... (folgender Reihenfolge)	22.2A1
account book	Geschäftsbuch	index, 4.1B2
acoustic recordings	Akustische Aufzeichnungen	index, 6.7B10
acronyms	Initialenfolge	index, uö.
(are/were) active *s.a.* country of residence	... gewirkt haben	22.3B4 ua.
activity card	Ereigniskarte	Index, App. D, 1.1C1, 8.5B1
adaption	Bearbeitung	1.7B2
added entry	Nebeneintragung	Anh. D
added to	(als) Zusatz zu	index unter academic

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Functional Requirements and Numbering of Authority Records (FRANAR) : to what extent authority control can be supported by technical means ?

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Abstract:

An IFLA Working Group on authority data was created in April 1999 under the acronym FRANAR for Functional Requirements And Numbering Authority Records. What are the terms of reference of FRANAR ? What were its activities during the past two years ? What is its action plan for the next months ?

An IFLA Working Group on authority data was created in April 1999 under the acronym FRANAR for Functional Requirements And Numbering Authority Records. The Group met during the annual conferences of IFLA at Bangkok in 1999, Jerusalem in 2000 and Boston in 2001. Moreover this year a special grant was allocated to the Group and FRANAR was able to hold a two-day meeting in May 2001 in Paris, at the invitation of the Bibliothèque nationale de France.

What are the terms of reference of FRANAR ? What were its activities during the past twoyears ? What is its action plan for the next months ?

1. FRANAR: What are the goals ? What are the members ?

FRANAR was created during a meeting of the Coordinating Board of the Division on Bibliographic Control , which brought together chairpersons and secretaries of the Section on Cataloguing, Bibliography, Classification and Indexing, with the UBCIM (Universal Bibliographic Control and International MARC) Programme Director. I attended this meeting as secretary of the Section on Bibliography, and I was entrusted by the Coordinating Board with the leadership of the Group, the definition of the terms of reference and the identification of possible members.

1.1. Why was FRANAR created ?

1.1.1. The need for an international standard authority data number (ISADN)

Some milestones :

- ISADN as a data element in an authority record (1984)

GARE (*Guidelines for Authority and Reference Entries*) published in 1984 (1) is the first set of recommendations concerning the content of authority records. According to this document, ISADN is one of the elements of the authority record, area 7-: "*The International Standard Authority Data Number Area serves to identify the number assigned to the authority entry for purposes of international exchange and control*" (p.20). ISADN itself is not defined in the guidelines-: there is just a footnote, which reads "*A proposal for an International Standard Authority Data Number is under discussion within the IFLA Working Group on an International Authority System*" (p.20). GARE does not indicate the structure of the number, just the fact that it is preceded by the letters ISADN and a space, and that if an ISADN has been assigned to the heading given in area 1, the ISADN must be given in area 7.
We can immediately sense an ambiguity : is an ISADN assigned to an authority record or to an authority heading ?

- a field is devoted to ISADN in the UNIMARC format for Authorities (1991)

GARE was the source for the elaboration of the universal exchange format for authority records, the UNIMARC format (2) published in 1991. So obviously we find in this format a 0XX block devoted to "*numbers that identify the record or the authority*", a field 015 with the label International Standard Authority Data Number. ISADN not yet being defined in 1991, the unique comment made for this field is "*Reserved for the ISADN*".
We can note that the block 0XX being devoted to numbers which identify either the authority record or the authority heading ; the ambiguity previously mentioned is not solved.

- ISADN is defined in a too ambitious way (1993)

In the report *International cooperation in the field of authority data* (3), in which I limited the scope of my study to authorities for names, several pages are devoted to the ISADN (p. 79-80) and we can read: "*The aim of the ISADN is to attribute a number to each entity which is the subject of a name access point (personal names, corporate bodies, uniform titles). This number makes it possible to identify unambiguously on an international scale unimpeded by barriers of language*". The comparison with ISSN and ISBN, already examined by the IFLA Working Group on an International Authority System (4), is the subject of a detailed study the conclusions of which concerning ISADN now appear to be ambitious, and even utopian:

- ISADN should not be assigned only to the authorized form but to the authority record as a whole
- ISADN should be an "intelligent" number the structure of which should be meaningful
- ISADN should be built automatically by a computer system from the fixed fields of an authority record

ISADN should have 4 segments : origin of the authority record, nationality of the entity, authority record number in the authority file of the responsible agency, reliability of the record (provisional or not). In addition it could be possible to link together several ISADN when different authority records are linked each other.

The architecture to be created to manage such a system and the constraints of a centralized or of a decentralized system are only briefly examined in the report.

- the demand for a definition of the ISADN becomes urgent (1998)

The Action Plan defined by an IFLA Seminar hold in Vilnius in June 1998 on the theme, "The function of bibliographic control in the global information infrastructure," contains the revision of UNIMARC/Authorities, the development of consistent and persistent vehicles for the international exchange of authority data and a reconsideration of a numbering system such as the ISADN (5). In August 1998, the definition of ISADN was asked by the participants at the "UNIMARC in transition" Workshop held in the framework of the IFLA annual conference in Amsterdam. Then the International Conference on National Bibliographic Services (ICNBS) held in Copenhagen in November 1998 recommended "*The national bibliographic agency should ... develop and promote standards, guidelines and methods for autority control to facilitate the international exchange of authority data*"

- ISADN is considered as necessary but we should still wait before giving it a definition (1998)

The Working Group on Minimal Level Authority Records and ISADN, created in 1996 under the auspices of the IFLA UBCIM Programme and chaired by Barbara Tillett (Library of Congress) submitted its final report in December 1998 (6). The participants came to realize that the goal of the Universal Bibliographic Control by way of requiring everyone to use the same form for headings globally is not practical. It is better to give priority in our catalogues and national bibliographies, to the form of names familiar to our users, forms thatcan be different according to linguistic or cultural areas. So, a numbering system, which allows link between different authority records established for the same entity by different bibliographic agencies, is quite necessary to assist in searching. It may be the control number of the authority record in the local database as well as an ISADN.

Nevertheless, the Group gave up defining such a numbering system and suggested to wait and see what solutions to manage links between records could be gained from new tehnical environment. In addition, opening the discussion to include other sectors such as archives, publishing, management of rights on intellectual property was proposed. And then the creation of another IFLA Working Group to examine these new ways to work was recommended.

- the feasibility study of an ISADN is one of the FRANAR's tasks (1999)

The aim is not to define ideally an ISADN but to examine the feasibility of an international number for authority records. That is to say to identify the possible uses and users of such a number, to determine for what types of authority records an ISADN should be necessary, and to think about how to structure and manage this number.

1.1.2. The need for functional requirements for authority records

- the FRBR does not deal with authority records on an exhaustive way (1998)
Parallel to these reflections/hesitations on ISADN, an IFLA Working Group on Functional Requirements for Bibliographic Records was created early in the 1990s and submitted its final report in 1998 (7). We can read in the introduction that all attributes and relations,which are normally expressed in authority records, are not completely taken into account in the FRBR model. In the model, entities,which constitute the main concern of authority records (persons, bodies, concepts), are defined and relations between these entities and bibliographic records are described. But for example, the report does not analyze either the additional data which are usually gathered in an authority record or relations which exist between these authority records and which are expressed through the network of links within the catalogue. The need to extend the model to authority records appears among the studies mentioned by the FRBR Working Group to complete the model.

- to define the functional requirements for authority records is one of the FRANAR's tasks (1999)
The aim is to define entities which should be the subject of an authority record, to identify the data elements which constitute an authority record, to study the relation between these elements and between authority records, and to verify at what extent all that meets the needs of users.

1.1.3. The need to keep in touch with the current international studies

One of the FRANAR's tasks is to liaise with the other IFLA working groups and with other international organizations or initiatives which show the same interest for authority data, especially with :

- the INDECS Project (Interoperability of Data in E-Commerce Systems) (8) set up in the framework of the Info2000 Programme and supported by the European Commission. INDECS took place from November 1998 to February 2000 and was very active when FRANAR was created in April 1999. Its ambition was to put coherence into different kinds of metadata created by different sectors working on intellectual property. One of the deliverables expected at the end of the project was a "Dictionary of parties", which is a collection of data necessary to identify uniquely the "participants" in a creation process as creators, producers or users, and the transactions relative to the intellectual property. The Dictionary was considered as a tool that should allow interoperability between authority data created by the collecting societies and those created by libraries, but it is just one example.

- the Commission on Descriptive Standards of the International Council on Archives which published in 1996 an *International Standard Archival Authority Record for Corporate Bodies, Persons and Families* (9). A joint meeting of IFLA/ICA was devoted to this standard in August 1995 in Beijing when the development of the text was in progress.

- ISO/TC46 "Information and Documentation", and more precisely the sub-committee 9 "Presentation, identification and description of documents" (10), in charge of the definition of international standard numbers for identification, such as the well-known ISSN, ISBN, but also

International Standard Audiovisual Number (ISAN), International Standard Work Code (ISWC), etc., from which we could take our inspiration to define ISADN.

- the Consortium for European Research Libraries (CERL) (11) which manages an union catalogue of hand-printed book between 1455 and 1830 (Hand Press Book Database) comprising separate files produced by several institutions but searchable at one time. A "Thesaurus" was in project when FRANAR was created, in order to manage the variant forms of place and author names, as a help in searching.

So the terms of reference of the FRANAR Working Group are:
- feasibility study on an International Standard for Authority Data Number (ISADN)
- definition of functional requirements for authority records
- liaison with other international organizations and initiatives in the field of authority data.

1.2. Who are the FRANAR members ?

FRANAR has 10 members plus Marie-France Plassard in her capacity as director of the IFLA UBCIM Programme. Some other experts will be contacted later to examine the work done by the Group. Most of the members are deeply involved in the Standing Committees of IFLA Sections and as such have taken part in the preparation of the different reports mentioned above. When FRANAR was created, all of us were involved in one of the international iniatives in progress on authority records.

Françoise Bourdon, Bibliothèque nationale de France (section on bibliography, MLAR, Permanent UNIMARC Committee since 2001)
Christel Hengel-Dittrich, Die Deutsche Bibliothek
Olga Lavrenova, Russian State Library
Andrew McEwan, The British Library (INDECS, MLAR)
Eeva Murtomaa, Helsinki University Library, Finland (section on bibliography, MLAR, liaison with ICA/CDS)
Glenn Patton, OCLC (section on cataloguing)
Henry Snyder, University of California at Riverside, USA (section of rare books, CERL)
Barbara Tillett, Library of Congress (section on cataloguing, FRBR, MLAR)
Harmut Walravens, International ISBN Agency, Germany (section on newspapers, ISO/TC46/SC9)
Mirna Willer, National and University Library, Croatia (chair of the Permanent UNIMARC Committee, CERL, MLAR, section Information Technology since 2001)

How this Working Group get organized to aim its goals ? What are the results of its activities two years after its creation ?

2. What priorities ? What methodology ? A progress report August 1999-August 2001

The Group met for the first time in Bangkok in August 1999 in the framework of the IFLA annual conference. This kick-off meeting was devoted to a summary report on the IFLA activities in the field of authority data to make clear the context of the work, and to the approval of the terms of reference. Each participant introduced him/herself and expressed his/her expectation.

The terms of reference mentioned above were approved. During this first meeting, we spoke more about the ISADN than about the functional requirements, certainly because it was in abeyance for a long time. The formula "ISADN desperately wanted" gives a good idea of what was the state of mind of the Group when it began to work.

2.1. ISADN : myth or reality ?

During its first meeting, the Group unanimously adopted a basic principle : no additional standard number will be created, but we will try to re-use an existing number. But have we a so clear-cut an idea of what is the goal : what do we want to number and why ?

2.1.1. What existing numbers could be re-used ?

Because the Group had to enrich its reflections with the works carried out in the framework of international programmes, the following two reports were put on the FRANAR agenda for the Paris meeting in May 2001. They dealt with a possible re-use of existing identifiers: numbers automatically assigned by systems to the authority records, and international standardized numbers already defined by ISO. If ISADN is able to make use of an existing number, ISADN is a reality !

- MACS and the use of a number assigned by a system to an authority record
The European Project MACS (Multilingual Access to subjects) shows that it is possible to rely on control numbers assigned by local information systems to authority records (e.g. field 001 in MARC records) to identify by a same numeric identifier the same concept existing in subject fields of bibliographic records which pertain to different databases. So, subject headings which represent the same concepts in 3 different languages (French, German and English) are linked together, and it is possible to use a subject heading in German to search a catalogue in which the subject headings are in French ... and to obtain relevant results ! In fact, the numeric identifier is assigned to a kind of meta-record in which are gathered the control number (field 001 in MARC records) of each authority record corresponding to the concerned subject headings. Don't hesitate to read the MACS report on feasibility to understand all the subtlety of the system (12) ! We can say that the number of the MACS link is a kind of ISADN assigned to the concept which is concerned. But nothing is magic : first an important work to identify the headings to link together must be made, a machine to house the application which manages links is needed, and some librarians to supervise time to time the smooth running of the work are required.

- the ISO international numbers
When the ISO standard on the International Standard Work Code (ISWC) was put into ballot in January 2000, the attention of FRANAR was drawn up on all the set of standardized numbers (ISAN, ISRC, ISMN, etc.) which were developed in the framework of ISO by the managers of rights on intellectual property. In fact, the agencies which are responsible for the numbers will develop large databases to manage the variant forms of titles of works and these databases should have a lot in common with our authority files. So, it was interesting to study the descriptive metadata linked to each ISO number : are these data likely those we deal with in libraries to carry out authority control ?
Within FRANAR, the work was done by e-mail from January to April 2000 and a synthesis was presented during the meeting of the Group in Jerusalem in August 2000. The Group stressed the

lack of consistency in terminology from a standard to another and that definitions are missing especially for terms used with a different sense than they usually have in librarianship ; for example the words "work", "expression" and "manifestation" do not designate the same entities if we compare these ISO standards and the FRBR. This is all the more annoying since some of these international standard numbers could be used as unambiguous identifiers for some of the entities we manage or we could have to manage in our authority files.

Patrick Le Boeuf (Bibliothèque nationale de France) who was invited to attend the FRANAR meeting in Paris in May 2001 as an observer did get discouraged by this and reported on the results of his work in this field (13). If the FRBR entities "work" and "expression" would systematically be the subject of records having the status of authority records (something that is not in accordance with the current rules of cataloguing), perhaps we could assimilate ISADN with

- ISAN for audiovisual "work"
- ISWC for the "expression" of a musical work (e.g. a music score)
- ISRC for the "expression" of a musical work (e.g. a sound recording)
- ISTC for the "expression" of a textual work, etc.

But this is just the very beginning of the reflection starting from the principle that these ISO numbers were created to meet the same goals that we aim at. Is it exactly the case ?

2.1.2. What do we want to number ?

Defining an identification number even before having defined the data to which it is supposed to be assigned could be considered "putting the cart before the horse "!

- what experience could we derive from the work of ISO/TC46/SC9 ?

A meeting of the managers of the different ISO numeric identifiers took place at the Bibliothèque nationale de France in February 2000 at the invitation of the ISO/TC46/SC9, and I was able to attend as an observer. I learned that

- each international standard number has a goal which is its own and which has an impact on the way it is created, assigned and managed and this explains in part why the descriptive metadata which are associated with it were defined separately without any consistency being established with what has been done elsewhere for another number.
- many of these numbers were created just to facilitate "business to business" relations, and they are not supposed to be used as search criteria or as identification element in the bibliographic or authority databases managed by libraries.

It stands to reason that :

- the ISO identifiers perhaps will not serve for use in the authority databases managed by libraries
- it is absolutely necessary to have a definite goal to define a consistent international numbering system.

Definitely said : we must know exactly what we want. But, in this quest of the ISADN do we know exactly what we search for ? What are the goals we aim at ? (to help search ? to facilitate authority management ?) What entities do we expect to identify ? What are the data elements which characterize these entities ? What relations are capable to exist between the different entites on the one hand, and between the data elements pertaining to a given entity on the other hand ? Is the international standard numbering of authority data still fit for acceptance to-day ? Are other technical means possible ?

During its meeting in May 2001, FRANAR decided to move its work towards the definition of functional requirements for authority records. It seems more pertinent first to know more about nature and functions of authority data we want to manage before defining an international numbering system supposed to identify them.

2.2. Functional requirements of authority records

To define the functional requirements for authority records is a harder task than for bibliographic records because the references we have when we start the work are less rich:
- the bibliographic records describe a document or a set of documents the physical existence of which is without question: even for a document without support (e.g. an on-line document) we can define characteristics such as extent of the file for example. But authority records concern intangible entities and are even more difficult to define.
- there is no equivalent of the ISBD for the authority records: there is no preliminary agreement on their content or on the reference sources to use for identifying them.
- the bibliographic record is useful for describing, identifying and even locating documents. What is the real use for authority record ? Who are the users ? For what are they used ?
- the notion of the authority record is more recent than the notion of the bibliographic record: end of the 19th century for the pioneers (Library of Congress), early in the 1980s and even later for the majority of other libraries. In this field the experience is less important, and it is obvious that even the notion of "authority record" inserted in an "authority file" like we know to-day is just a step towards another more wide-open model for authority data.

FRANAR must answer the following questions which constitute its action plan for the next months :

2.2.1. What are the concerned entities ?

Entities which already exist in our authority files are concerned : names of persons, corporate bodies, uniform titles, subjects, etc. Others, less common but already defined in the second edition of the UNIMARC format for authority records published in March 2001 (14), are also concerned : "trademark", "place" and "form, genre or physical characteristics". And are the entities "work" and "expression" defined in the FRBR intended to be managed in authority records ? Should other types of entities be taken into account to meet the needs of users outside the library world, such as publishers, producers, archivists, rights managers, museum-users ?

2.2.2. What are the elements of data which constitute an authority record ?

GARE (1), then GARR (15), UNIMARC (2 and 14), and MLAR (5) list and define the elements of data, and recommend their presence and their structure in authority records, but a real study on recording and definition of elements of data which form an authority record according to their uses remains to be done: how to define the fullness of an authority record (full encoding level, core encoding level, minimal encoding level) ? What element of an authority record is an authority : only the heading r the set of elements ? only the elements the source of which is known, etc. ? Who settles it: the user, the manager, the context, etc.? Have the data to be organized in an authority record to be an authority ? Authority record, authority data, authority information: is this terminological shift expressed a real evolution in the definition, role and use of elements of data which are supposed to be an authority in systems more and more opened ?

2.2.3. What is the use of an authority record ? Who are the users of authority records ?

Created first to assist cataloguers in establishing and managing access points to descriptive records in a given catalogue, authority records are today offered to end-users both as an help for searching and as an additional value improving the bibliographical information. Because the supply has an effect on the demand, users certainly will urge us to think differently about authority records to better adapt their content to their expectations. According to the development of rights management in cultural institutions, because authority records are able to uniquely identify rights holders, works, etc., they find a new way to be used. Nevertheless an authority file is not a biographical dictionary, nor a corporate bodies directory, etc., but where is the boundary ?

2.2.4. What modelling for authority records ?

When the concerned entities, the elements of data which constitute authority records, and the real or possible users of these recordshave been defined, how should we organize them ? What are the characteristics of each entity, of each element of data, of each user ? How are these components linked together to finally create an information system ?

To work along these lines, FRANAR will keep in touch with international programmes in progress, for example :
- the INTERPARTY project which, if the European Commission accepted it, should take up and develop the "Dictionary of Parties" first proposed by INDECS in 2000 and aim at a unique identification of participants in e-commerce ;
- the LEAF project (Linking and Exploring Authority Files) started in Spring 2001 as a follow-up of the MALVINE project (Manuscripts and Letters Via Integrated Networks in Europe) and which will propose a distributed search system based on several authority files for persons and corporate bodies (16) ;
- The CERL Thesaurus (Consortium of European Research Libraries) which will allow to manage the variant forms of imprint places, author names and printers' names to make easier the access to the Hand Press Book database, but without any given authority form having priority over any other one (11) ;
- the MACS project (Multilingual ACcess to Subjects) carried on since 1998 on behalf of the CENL (Conference of European National Libraries) which proposed to develop a system for providing multilingual subject access for the end-user by mapping terms between existing 3 subject heading languages (English, French and German) (12) ;
- the "Encoded Archival Context " project, discussed in March 2001 in the framework of a meeting between archivists in Toronto and which should aim at defining a DTD XML to structure the contextual information being inspired by the ISAAR (CPF) (9).

Litte by little all these projects bring to light a new way to conceive authority control, in which technical means play a more and more important role . To what extent authority control can be supported by technical means ?

Conclusion : FRANAR good and bad points

There are more questions than answers in this paper and one could deduce that the outcome is poor, that FRANAR is progressing slowly, too slowly ! Why ?

FRANAR members are well experienced professionals, that is a good point. But all of them are from the library world, which is not surprising for an IFLA working group, but that is a

disadvantage : it would be better to be joined by professionals from archives, museums, and by rights managers.
FRANAR is taking advantage of the work that went into FRBR, that is a good point. But the FRBR working group rested on sound basis (ISBDs) and was able to appoint consultants. Concerning authority records, the starting deal was less wealthy and FRANAR cannot afford to work with a consultant. That is a major disadvantage because data modeling is a special technique and FRANAR members are not familiar with it. FRANAR is monitoring technological development, but without being able to make profit of this activity by regularly meeting and sharing information to enrich its own reflection.

Nevertheless, even if FRANAR is not profiled and has no grant to define a data model able to have such an important impact as the FRBR, FRANAR is a promising focal point to discuss and to exchange. Carry on thinking, modeling and suggesting : something will come out !

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A Virtual International Authority File

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Abstract:

A pool of authority records for bibliographic entities (persons, corporate bodies, works/expressions, concepts objects, events, and places) to use on the Internet is of interest not only to libraries and their users but also to publishers, copyright and rights management organizations, museums, and archives. This paper will explore how this all might actually work. Authority control remains the most expensive part of cataloging, but through cooperative efforts like NACO, SACO, and IFLA initiatives, the research done in one library can be shared internationally to lower the cost.

It has often been observed that the current Web is chaotic for finding information. It needs help and we can provide it! Introducing an element of authority control to the Web environment would help meet these objectives:

- to facilitate the sharing of the workload to reduce cataloguing costs - and our community has expanded, especially in Europe these days, where libraries are viewed with archives, museums, and rights management agencies as "memory institutions." Shared authority information will reduce costs overall. Other objectives for authority control are
- to simplify the creation and maintenance of authority records internationally and
- to enable users to access information in the language, scripts, and form they prefer or that their local library provides for them.

The virtues of authority control have been debated and restated for decades. When we apply authority control in the Web environment, we are reminded how it brings precision to searches, how the syndetic structure of references enables navigation and provides explanations for variations and inconsistencies, how the controlled forms of names and titles and subjects help collocate works in displays, how we can actually link to the authorized forms of names, titles, and subject that are used in various tools, like directories, biographies, abstracting and indexing services, and so on…We can use the linking capability to include library catalogues in the mix of various tools that are available on the Web. Controlling forms used for access and displays provides consistency for users.

We are all aware of very poor OPACs that lack cross references or links to authority files and without these features, quite frankly, they are not catalogues!

Over the past few years there have been several projects that help us get closer to providing authority control on a global scale. In my paper[1] for the LC Bicentennial Conference on Bibliographic Control in the New Millennium last November, I described the AUTHOR Project (European Union), the report of the IFLA MLAR (Minimal Level Authority Records) that identified essential data elements needed in authority records (today we'd call these metadata); the IFLA FRANAR (Functional Requirements for Authority Numbers and Records (you will have just heard about this from Françoise Bourdon); Dublin Core/Authorities; discussions about CORC authority records for a possible global expansion to build an authority file; more global capability with multi-scripting with Unicode in Windows; and the expansion of NACO and SACO to AACR2 and LCSH (Library of Congress Subject Headings) to users worldwide. I won't go into more detail today, but my paper also indicated the recent focus on the need for interoperability and how we can now map different communication formats with Z39.50 protocols (in fact the LEAF Project explores this model).

There are also crosswalks to the "MARCs" including XML, ONIX, and others. These crosswalks can help us to search and retrieve library resources effectively with abstracting and indexing services and other resources on the Web. All of these technological capabilities are coming together now and we are really at the brink of making a virtual international authority file a reality.

We are also making an historic change to how we view Universal Bibliographic Control. The IFLA UBC principles for authority control are parallel to those for bibliographic control, namely that 1) each country is responsible for the authorized headings for its own personal and corporate authors (they didn't mention uniform titles, series, or subjects), and 2) the authority records created by each national bibliographic agency would be available to all other countries needing authority records for those same authors.

In the 1960's and 1970's when this was really catching on, technology had not yet advanced to make such sharing practical on an international level. Plus the lack of funding for an international center to manage such a program prevented that visionary concept from becoming reality.

For the past couple of years a new view of Universal Bibliographic Control is emerging from several working groups within IFLA. This new perspective reinforces the importance of authority control, yet puts the user first…It's a practical approach that recognizes a user in China may not want to see the heading for Confucius in a Latinized form or a strange pinyin romanized form, but in their own script.

Yet to still get the benefits of shared authority work and creation of bibliographic records that can be re-used worldwide, we can link authorized forms of names, titles, and even subjects through the authority files of national bibliographic agencies and other regional agencies to create a virtual international authority file. There are several models for how this might work and we need to do more pilot projects of prototypes of models to test which would be best to pursue.

In order to be of most use to the library users in each country, the scripts should be the scripts they can read! What a novel idea! Transliteration may serve as a way for some users to be able to decipher records, but the accuracy of using original scripts is much better. We should now provide at least cross references for variant forms of headings in variant scripts when that is appropriate. In the United States MARBI is starting to explore this possibility and more work needs to be done. We should eventually be able to display the script and form of a heading that the user expects and wants.

I believe that many of us realize the value of parallel authority records for the same entity that allow us to set up the syndetic structure of cross references and authorized forms of headings to be used in catalogues intended for a specific audience and include variants in alternate scripts at least as cross references.

As we look at linking we must recognize that different cataloguing rules have differences in what are considered entities - AACR2's choices are not universal, for example, German rules do not recognize that the ships logs can be under an entry for the name of the ship, so they would not have an authority record for ships names, but AACR rules would have such an entry. Similarly for events, for meetings of corporate bodies, the German rules would not create a heading for the entity that AACR2 creates in as a hierarchically subordinate heading for Meeting under the name of the corporate body.

There are also different practices for undifferentiated names - the Germans recently changed their rules to differentiate more names, but they used undifferentiated forms for personal names using just initials for forenames. However, we all know that even under the same cataloguing rules, say AACR2, we find we can make a new separate record for an entity when we get more information to differentiate that person, so the record for the undifferentiated name can reflect different associated entities over time.

So how do we get to a virtual international authority file? Several major authority files exist, built according to their own cataloguing rules and rule interpretations. It would be helpful to conduct a one-time project to link the existing records for the same entity - a retrospective matching project. One suggestion has been to use matching algorithms, such as those developed by Ed O'Neill and others at OCLC, building on bibliographic clues for machine matching at a fairly high level of accuracy. We would still have manual matching and checking to do, but could get a long way with machine matching. We could also have the computer add the linking text strings and record control numbers to facilitate later links and pathways to preferred forms for displays.

Some local systems already provide us with computer-assisted mechanisms for automatic checking of headings against an existing authority file, and we could see this expanded to then launch a search against a virtual international authority file, if no match was found locally.

We can also envision the capability of displaying the found matches from the virtual file for a cataloguer to edit or to merge information, if desired, into the local authority record, including capturing the information for future linking.

Some systems now provide community specific retrievals to concentrate on the subject needs of a community in selecting resources for online searches, and other systems like "my library" or "my opac" even go beyond that to individual specific retrievals. Those could build in the authority preferences for user preferred scripts and displays for controlled vocabularies.

We want to have the authorized form preferred by a library as the default offered to most users, but we can also envision offering user-selected preferences through client software, or "cookies" that let the user specify once what their preferred language, script, or cultural preference is - for example for spelling preferences when cultures have variations, like American English and spelling preferences in the United Kingdom - labor and labour...

Other ways to do this that have been suggested over the years are standard numbers, like the ISAN, INSAN, ISADN, etc., but I would prefer that we test using the unique, persistent record control numbers and see if that works. That saves having to set up another international organization to manage the distribution and maintenance of such numbers. In my paper for the LC Bicentennial Conference, I provided several scenarios of how this might play out. Let's quickly take a look at two.

A cataloguer types in information into a bibliographic record and the local system checks the local authority file. The local system finds the record in the local authority file and displays it so the cataloguer can confirm it is the same entity. Then, we'd like the system to automatically update the bibliographic record with the authorized information from that authority record, once confirmed by the cataloguer.

Now what about the scenario of no record in the local file? A cataloguer types in information, and the local system checks the local authority file. The response is there is no match, so the system tells the cataloguer and allows the cataloguer to launch a Web search for the virtual international authority file. With the Internet running much faster than it does now, we would quickly get the results, in this case, the match with a record created at the National Library of Russia in St. Petersburg (see figures). Our cataloguer takes a look and perhaps does not want all the information but likes a reference or two and wants a link. The local system asks the cataloguer if she wants the system to create a basic authority record from the one found and to make a link to it…and we say yes... Our local system then builds a local authority record, grabbing the linking information from the virtual authority file - that is the record from St. Petersburg. The cataloger then adds the 100 authorized form according to the locally used cataloguing rules, in this case AACR2, and our cataloguer can add other fields if needed. The local system adds the linking 700 field - the MARC format has the 7xx fields in authority records, where we can put the linking authorized form and the record control number and the source information for future linking. This linking of authority files would primarily be among the national or regional authority files of national bibliographic agencies - depending on the model we choose. I'll come back to that in a minute.

So we've now added another link in the virtual international authority file to the authorized form following AACR2 and the Russian record for the same entity following the Russian cataloguing rules in Cyrillic script. Our local system updates our local bibliographic record.

When a user comes along, the local system or the cookies on the user's system, could specify the user wants to see the Cyrillic form, and we could display it for them. You can also imagine displaying any script or a Braille keyboard output, or we could provide voice recognition response, built on a user's profile or their "cookie."

Some of the possible models for a virtual international authority system are: a distributed system that searches the independent authority files of national bibliographic agencies using a Z39.50 search; a linked system using a Z39.50 search on linked authority records (this increases the precision of the search); a centralized system such as using the Open Archive Initiative (OAI) model that creates a union authority file of metadata on server linked to national authority files; or another model is a central link system where all of the authority files from all of the national bibliographic agencies are linked to one.

With the distributed and linked Z39.50 models, a user could key in a term that perhaps that only appears as a cross reference in one file so it is retrieved, but also linked to another record in another file, so that too is retrieved for that same entity. We may find that this model is the best approach in terms of record maintenance.

The Open Archives Initiative model creates a server with harvested metadata from the national authority files, and that information is refreshed in the server whenever there are changes in the national files. This means the day to day record maintenance activities continue to be managed as they are now by the national bibliographic agency (or regional authority). Unless we also build in the linking, we possibly will lose a level of precision in the searching in this model; but there are ways to include the links for entities in this model, too. There are many variations of models we could imagine.

Another model would be using one central authority file and link all others to that, so that work would not need to be done by each national bibliographic agency with all other participants in this international universe. A cataloguer would then get access to all the authority records for that entity worldwide by a single search of the central file. If there was not match in that central file, a search could then be made with Z39.50 to the other files.

I am sure you can imagine other variations of these models. And we need to try them out to see which will be best for us in today's Internet environment.

I offered the following four recommendations in my paper:

1) test this concept of linked authority files;

2) establish a Z39.50 profile for authority records (this is underway as an extension of the Bath Profile);

3) work with local system vendors to enhance this capability of local systems enabling the creation of authority records and searching the Web for resource authority records; as well as the other half from the user's perspective to display their preferred script or orthography; and

4) work with creators of search engines on the Web to expand this concept to databases and resources they search and bring some control to the chaos.

This gives you some ideas of how cataloguers can build authority records on the Web and then, once the authority control structure is there worldwide, this can include other stakeholders (publishers, rights management agencies, archives, museums, and other libraries) - all can use this information and reduce costs. Authority control will help users of the Web to benefit from collocation and search precision that authority control enables and do it in ways that are meaningful to users in their preferred language and script.

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Early Literacy Activities in the USA

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Good afternoon. My name is Carole Fiore. In addition to being the youth services consultant with the Florida Department of State, Division of Library and Information Services, I am also an independent library consultant specializing in services for children and young adults. Today, however, I am here today with my third hat on. I am here today as president of the Association for Library Service to Children, a division of the American Library Association. When I told my associates that I was going to be attending the International Federation of Library Associations conference here in Boston, they said that it was a shame that it was not in some more exotic or foreign location – like Amsterdam or Jerusalem or Havana. My response was that for me Boston was somewhat foreign. Here, many people talk with an accent – and I've never been in Boston before. So, even though we are in the United States, Boston is somewhat foreign to me, and I am delighted to be here with you today.

Before I begin my formal presentation, I would like to invite all of you to a tea that the Association for Library Service to Children, the organization that I am representing today, will be hosting immediately after this program. The tea will be held just outside this room. I would be delighted to talk with all of you at what I am sure will be an enjoyable event.

My topic today is something that I feel passionate about – early literacy activities in and sponsored by libraries. My training is two fold: I earned my bachelor's degree in early childhood and elementary education; and my master's degree in library science. Working with early literacy projects combines my interests into something that can and does make a difference in our communities and for the people that live in them. And making a difference – that is making an impact on the community – is an important thing for libraries to do. If what the library is doing does not make a positive impact on the its users and potential users, than it is not worth doing.

But, if you what to know that what the library is doing **is** making an impact on the community, it means that you must know what the problem is. And the problem here in the United States is that many children do not enter school with the literacy skills to be ready to learn at their optimum.

While there are many indicators of children's well-being, libraries cannot necessarily address all these social problems. But libraries need to be aware of the factors that impact the lives of the children and the families that they serve. For example:

- In 1999, the most recent year for which we have statistics, there were 70.2 million children under age 18 in the United States, or 26 percent of the population, down from a peak of 36 percent at the end of the baby book in 1964. Children are expected to remain a stable percentage of the total population as they are projected to comprise 24 percent of the population in 2024. Updated statistics will be available as soon as all the data from the 2000 census is released and analyzed.

- The racial and ethnic diversity of America's children continues to increase. In 1999, 65 percent of U.S. children were white, non-Hispanic; 15 percent were black, non-Hispanic; 4 percent were Asian or Pacific Islander; and 1 percent were American Indian or Alaskan Native. The number of Hispanic children has increased faster than that of any other racial or ethnic group, growing from 9 percent of the child population in 1980 to 16 percent in 1999.

- The family structures children live in have become more varied. The percentage of children living with one parent increased from 20 percent in 1980 to 27 percent in 1999. Most children living with single parents live with a single mother. However, the proportion of children living with single fathers doubled over this same time period, from 2 percent in 1980 to 4 percent in 1999.

- In 1999, 54 percent of children from birth through third grade (approximately 8 years of age) received some form of childcare on a regular basis from persons other than their parents. This is up from 51 percent in 1995. This means that fewer parents bring their young children to storytimes that are presented on weekday mornings. Knowing this helps library adjust their schedules and program offerings.

While libraries cannot specifically address the health needs of children, library programs can assist the health care community to do that. Here are 2 of the medical indicators that relate to early literacy.

- The percentage of children born with low birth weight (less than 5.5 pounds) or very low birth weight (less than 3.3 pounds) has steadily increased since 1984. And these children are more at risk for developmental delays than babies born at normal weight.
- The birth rate for adolescents dropped by more than one-fifth between 1991 and 1998. In 1998, the birth rate for 15- to 17-year-olds was 30 percent per 100 females in that age range, the lowest it has been in at least 40 years. Even though the teen pregnancy rate has dropped, it still is a significant problem.

Later in this presentation you will hear about several program where libraries work hand in hand with the health care community to improve the lives of children.

The following indicators relate specifically to education – indicators where many people would see the logical involvement of libraries.

- In 1999, 53 percent of children ages 3 to 5 were read to daily by a family member, the same as in 1993, after increasing to 57 percent in 1996.
- Between 1996 and 1999, the percentage of children not yet in kindergarten who were enrolled in early childhood centers rose from 55 to 59 percent. The largest increases were among children living in poverty, children with mothers who were not in the labor force, and black, non-Hispanic children.
- Upon entering kindergarten in 1998, 66 percent of children were able to recognize letters and 29 percent knew the sounds and letters that begin words – important skills in developing the ability to read.[1]

These are just some of the problems facing the children of the United States – and therefore facing the libraries that serve them. But now we also need to know what emergent and early literacy is and what libraries can do to help address these problems.

The Public Library Association, a division of the American Library Association, has partnered with the National Institute of Child Health and Human Development (NICHD), of the National Institutes of Health (NIH), to provide information and training that is designed to assist parents and teachers of preschool children get ready to read. They have defined emergent literacy as:

> . . . what children know about reading and writing before they can actually read or write. Young children's emergent literacy skills are the building blocks for later reading and writing. Children learn these skills before they start school, and this begins in infancy. From birth throughout the preschool years, children develop knowledge of spoken language, the sounds from which words are formed, letters, writing, and books. This is the beginning of the abilities that children need to be able to learn to read and write in school. [2]

Public libraries are uniquely suited to address the issue of emergent literacy. As I am sure you are aware, public libraries are one of the few agencies that are positioned to work with members of their communities from the cradle through the grave. Not only that, local public libraries are the great economic equalizers in the community. There is no other agency that is free and available to all community members from birth and throughout their lives. Public libraries ensure equity of access for all citizens and community residents. Public libraries also link families to information and education resources within the library and to other community services and programs.

Traditionally, public libraries have offered story times for preschool children. But several years ago, those of us who work with young children, their parents, teachers, and care givers, came to the realization that reading begins before children came to us for storytimes at the age of 3 or 4 years of age. Through practice and experience, children's librarians realized what PLA and NICHD have recently defined. And children's librarians put into practice what PLAs and NICHDs research is now documenting.

Practitioners -- front line children's librarians -- work in partnership with various community, social service, and education agencies within each of their communities to put into practice many varied and exciting programs that address the literacy needs of children and their families. Many of these programs are based on the brain research that has recently made headlines in our national press. Both *Time* and *Newsweek*, popular newsmagazines here in the US, published special issues highlighting these findings. While I am not a neuroscientist or a physician, I have come to understand the basic scientific concepts of the brain research that these publications and others have made available and understandable to lay people.

I would like you to look at this transparency. The two brains that are shown here are the brains of two children of the same age. The noninvasive procedure that permitted these scans to be taken was not available to researchers 10 to 20 years ago. Without the CAT scan – computer assisted thermography – the only way a researcher previously could look at a brain was during an autopsy. With this new technology, researchers can see how a person's brain functions – in real time, as it functions. Now back to these CAT scans. The one on the left shows the brain of a "normal" child, a child who has had numerous literacy experiences. Notice the red and orange areas. These bright colors show that there is lots of brain activity happening. The synapses are making connections. This brain is working and growing. Now look at the brain on the right. Notice the dark areas within the circles. These areas have not developed as they have in the child that has had lots of experiences – lots of language and literacy experiences. The child on the right was raised in a Romanian orphanage and was not held. No one spoke with this child on a regular basis. No one sang nursery rhymes for this baby. This child was not read to. This lack of stimulation has resulted in a human brain that does not function at its optimum. This child has been left scared for life. While some areas of the brain are resilient, some areas cannot be regenerated – no matter how much stimulation if provided to the child later in life.

In a report issued by the National Center for Education Statistics in March 2000, the US Department of Education, Office of Educational Research and Improvement summarized research by several people. The report states:

> Children begin the process of learning to read long before they enter formal schooling. . . For decades, research has shown that children whose parents read to them become better readers and do better in school. But reading to children is not the only activity that helps children become readers and to do better in school. Activities such as telling stories and singing songs may also encourage the acquisition of literacy skills.[3]

The report also states that 49 percent of children whose families took them to the library at least once in the past month show three or more signs of emerging literacy compared to 33 percent of children whose families did not take them to the library in the past month.

Research has also found that the single most important activity for building the knowledge required for eventual success in reading is reading aloud to children.[4] Nationally, one out of five children enter kindergarten lacking basic print familiarity skills and one out of three children do not recognize alphabet letters. Libraries have responded by designing programs that encourage reading aloud and other such literacy activities. So, by designing these programs and encouraging and promoting library use, libraries are contributing to the literacy experiences of children and their families.

Libraries can and do work with parents to provide them the skills and confidence to interact with their own children. Libraries provide the programs and materials to help parents to become effective first and most important teachers of their children.

For instance, the Providence (RI) Public Library is a "Family Place" library. In this all-encompassing program, the library offers many early childhood services. One of programs for very young children and their families is *Cradle to Crayons*, a program for children ages 1 to 3 and their parent or caregiver. This parent/child workshop engages 10 to 15 children and their parents or caregivers in five sessions involving playing in a room full of developmentally appropriate toys while in conversation with outside experts on child development, speech and language, nutrition, and movement issues. Many libraries across the US are participating in similar Family Place programs.

Another early literacy program is on the West Coast. The San Mateo (CA) County Library, working in partnership with other agencies, created the Literacy Network Committee. This network is made up of agencies and individuals who are concerned with literacy. Jeanine Asche, the library staff member involved with this project approached the county health department that was launching a prenatal-to-three initiative. As this initiative was designed to be a holistic approach to early childhood healthcare, the library was able to able to contribute to this, as literacy is a key factor in maintaining good health and a healthy lifestyle. Because of this partnership – involving the library, the health care agency, and community service and literacy agencies – the group was able to apply for – and receive – a grant from the Peninsula Community Foundation. The application the previous year without the cooperative partnerships was not funded. One of the main components of this program is the take-home early literacy book bag that encourages low-income families to read together.

A library system in the northwest has numerous programs for very young children. The Multnomah County Library in Portland, Oregon has such a strong commitment to early childhood services that they established a separate department – Early Childhood Resources Department -- 12 years ago. Since access to books is extremely important to developing literacy skills, this library has a Book Delivery program that visits over 250-child care centers, family child care homes, social service agencies, and Head Start Programs. Each site receives 50 children's picture books every two months. To help the staff of these agencies meet their continuing education needs, the library also offers six professional development group training opportunities each year. To enhance their Language and Literacy Mentoring program, the library has been the recipient of a county Commission on Children Families and Community grant to encourage literacy development in children. They have produced two videos – Born to Succeed and La llava del excito – to encourage parents to read to their children. The library is currently producing another pair of videos in English and Spanish that will show how to read to children. Libraries throughout the nation have purchased the materials they produced to enhance their local programs.

As you may have noticed, many of these programs are successful due to the multifaceted nature of the programs and the various partner agencies that are involved. No one library or agency can address all the problems that I discussed at the beginning of this paper. No one agency has the staff, skills, contacts, or money to reach the large numbers of potential clients. Partnerships, collaborations, and cooperation with other youth serving agencies are the keys to the success of these programs.

Early literacy programs in libraries are not limited to the east and west coasts. The Duluth (MN) Public Library received a grant from the Duluth-Superior Area Community Foundation to initiate and expand their Book Time with Your Baby program. Officially launched in June 1999, this is now an ongoing cooperative initiative between the Duluth Public Library, the Duluth Area Family Services Cooperative, and other area agencies serving children, families, and caregivers. It includes a publicity campaign (to improve community awareness of issues related to early literacy); educational programming for parents, caregivers, and professionals; and fundraising to ensure that the program can continue. The fundamental message of Book Time with Your Baby is that sharing reading with infants and toddlers stimulates brain development, helps prepare children for reading, creates excitement about learning and encourages imagination – and can be both free and fun! Perhaps most importantly, it also strengthens the emotional bond between a caregiver and a child. The act of reading with a child says, "You're important; we're important together; what we are doing is important." In one year, the program reached 1283 adults and 645 babies and young children in 92 programs. In addition, library staff presented 27 prenatal classes reaching approximately 1000 adults. Not only that, hospital volunteers presented approximately 2500 books to newborns, making an effort to share Book Time information directly with parents.

Not only have local libraries initiated programs, state agencies and national associations have provided model programs that can be replicated at the local level.

The Vermont Center for the Book, in cooperation with the National Science Foundation, created a program called "Mother Goose Asks 'Why?'" The program provides a family activity guide introducing science through great children's literature. Through a variety of grants, this program has expanded to many other states. The Vermont Center for the Book has worked in cooperation with the Vermont State Library and the Vermont Department of Education to expand content and reach. The expanded program content includes "Mother Goose Meets Mother Nature," "Count on Mother Goose," and "Growing with Mother Goose." The latest expansion is "Mother Goose Cares about Literacy and Living Together." This, as with all the other "Mother Goose" programs is grounded in the literacy prerequisites for preschool children, including phonemic awareness, book awareness, print familiarity, vocabulary development, story, rhythm, rhyme, and the relationship of print to meaning. During this new pilot project, 400 child care providers in Ohio and Vermont will be trained.

Motheread, Inc. is a multidimensional national literacy organization that began as an intergenerational approach to developing literacy skills. Based in Raleigh, North Carolina, this organization has developed a curriculum based on outstanding, multicultural children's books and provides a training institute that teaches participants how to implement their instructional model and curriculum in their local communities. The 24 hours of training that institute participants receive teaches them how to work with parents to improve their own literacy skills, how to help children become better readers, thinkers, and problem-solvers. These activities not only help with literacy development, but also improve family communication. One area of the curriculum is B.A.B.Y. – Birth and Beginning Years. This segment of the program uses children's literature as a basis for discussion of prenatal and child development themes, while teaching skills related to emergent literacy. As more libraries learn about this program, they are sending staff for training and implementing the Motheread approach in their communities.

The medical community has also developed a program that incorporates a holistic approach to health and literacy. The Reach Out and Read program, that comes under the bigger national umbrella of Prescription for Reading, has pediatricians "prescribing" reading as part of the sixth month well-baby check-up. As I previously stated, there is a direct relationship between health and well being and literacy. My problem with this well-accepted program is that it waits to connect children and their families with books and reading until the baby is 6 months old. Considering that brain development begins even before birth and is explosively developing during the first year of life, it seems a waste of precious time not to utilize those vital first six months of life when those synapses are developing.

The Association for Library Service to Children (ALSC), whom I am representing today, has not ignored the literacy needs of children. The Association has been the driving force behind two national initiatives that address the literacy needs of children and their families. The first is the Library-Museum-Head Start Partnership. This project administered by the Center for the Book in the Library of Congress ran from 1992 through 1997. This partnership project started out as a collaborative project between the ALSC and the Head Start Bureau of the US Department of Health and Human Services. In 1994, the Association of Youth Museums joined the collaboration. This project was designed to demonstrate that in communities across the country, libraries that serve young children and their families can plan and work with Head Start grantees and classroom teachers to enhance learning and to involve parents and other primary caregivers and families in children's literacy and language development. While this project is "officially" complete, the lessons learned during its implementation are still in practice.

This successful project was followed by the Born to Read project. Began as a national demonstration project by the ALSC and originally funded by the Prudential Foundation, the Born to Read project established five demonstration sites. The purpose of this program, as many other projects I have discussed here today, was to provide parents – especially low literate, low income, and/or teen parents – the skills and materials to allow parents and other primary caregivers to provide age and developmentally appropriate literacy experience for their children. This national demonstration project had libraries working in partnership with a health care provider in their local communities.

In 1996, I was able to initiate a statewide Born to Read program in my state, Florida. Utilizing federal Library Services and Technology Act (LSTA) grant funds, we established ten pilot sites. Over the past several years, we have been able to expand this early literacy program to libraries in over 25 of our 67 counties. Many of the projects are funded with LSTA grant funds that are administered by the Florida Department of State, Division of Library and Information Services, the agency I work for. Some of these projects started by using state family literacy grant funds, while others used local funds to start and/or continue the projects.

A while back, someone asked me what contributed to the success of the local BTR programs in Florida. I responded that there really are two primary reasons for our successes:

> First, rather than having the library partner only with a health care partner, our programs also have to have a community service partner. Involving other agencies from the beginning insures community buy-in from the start. This buy-in ensures that when grant funds are no longer available, the community will be behind the project and that usually guarantees its continuation. Secondly, we provide training and sample materials for all of our grantees. In addition to providing an annual capacity building workshop for all grant recipients – including staff and volunteers from the partner agencies, I have done numerous training sessions for other child serving agencies. Many times, it is as a result of these outreach programs that libraries are brought into the loop when another agency is interested in establishing an early literacy program. Other agencies are recognizing the expertise that our public library children's staff has.

As part of our statewide program, we produced a video that shows why we in Florida are putting such an emphasis on BTR in Florida. It also shows some of the materials and training we provide, and most importantly, what impact the Born to Read program is having on our target population. I invite you to sit back now, and see how we have implemented Born to Read – Florida Style.

(Show Video)
(Answer questions)

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Strong Girls and Bright Colours- current themes in Swedish picture books

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Strong girls and bright colours characterise many Swedish picture books in recent years. The girls are visible and active and there are lots of wise mothers too. The picture book may deal with very difficult subjects, like death, as well as with pure nonsense. Sweden has many good illustrators who work experimentally with colours and shapes. Some are influenced by cartoons and they use their expressions widely, humorously, artistically and are highly innovative.

One of the themes in Swedish picture books that I want to emphasise is the deep experiences and feelings that we all meet in life, no matter who or where we are - essential emotions like jealousy, bad conscience or the fear of not being good enough. This theme is difficult to mirror, but many authors/illustrators have succeeded quite well within the wide concept of the picture book. Some put the stress on the words and some on the pictures, but the strong expression is made by words and pictures together forming an ikonotext.

Strong Girls – the gender perspective

I am glad to say that there are plenty of strong, brave, even striking, girls in the picture books of recent years; girls who take the initiative, who don't back off even if they are afraid.
We can talk about a gender perspective in the picture book and the need to high-light girls as main characters. There is definitely a gender discussion going on in Swedish picture books today.

"Nice girls go to heaven, others will go as far as ever" is an expression that is often illustrated by a woman who looks at herself in a mirror. In ***"My bold mouth***" with words by *Kim Futz* and pictures by *Eva Eriksson*, the opening scene is a girl who looks at her bold mouth in a mirror, looks and remembers what happened earlier the same day.

The approach is retro-perspective, unusual for picture books. The story is about the mouth that doesn't do what the owner wants. It says nasty things to people the whole day, but in the end, the girl gets two lovely rewards: a candy and a kiss. To be impudent may be a good thing, sometimes…
Eva Eriksson is one of the most skilful Swedish illustrators who also create picture books of her own, writing the words as well.

Gittan and the Grey Wolves by *Pija Lindenbaum* won the August Prize 2000 – a Swedish award for the best children's book of the year. The book is very wise and humorous.
The fantastic illustrations cover the pages generously. The pictures play with shapes, perspectives and movements.

Gittan is a girl who doesn't do what girls are not supposed to. She dares almost nothing at all. But one day, left alone by her pre-school group, she meets the grey wolves. She immediately takes the lead and commands the wolves to play with her. Red is the dominating colour in the pictures. Red is also the colour of Gittan´s jacket.

The story is about fear and courage. How to overcome one's fear, and that everything is not shown on the surface of people. The story has background from reality. Pija´s own daughter was just such a girl who didn't dare to climb. In the book as well as in reality, the final picture illustrates the girl standing on the rooftop of the playhouse… *Pija Lindenbaum* illustrates and writes as well.

The girl who just wanted to read (ill.: *Anna Clara Tidholm*, words by *Sonja Hulth*)
This book is about a girl who lives on top of a hill in a house without electricity. She carries home lots of books from the library, but at home there is no light. So she buys a windmill from a post order company, but then the winds themselves disappear. There's only one thing to do: go out and hunt for winds. And the winds promise to blow as long as there are unread books in the world…
This girl is positive to identify with. She is active, practical and she does just what she wants to do – she reads.

Ann-Clara Tidholm is one of my favourites. She is a skilful illustrator, often illustrating together with her husband Thomas who does the lyrics. Their picture books have important messages and shows great respect for children, especially the very small ones.

Eva Lindström likes to write about strong independent girls who do what they want. In
Me and Stig dig a hole the girl is the one who does things, rolls downhill and digs.
Stig doesn´t dare. Instead he reads cartoons. When Stig falls into the hole, the girl lifts him up again, and when they quarrel, she is the one who compromises. The book deals skilfully with conflicts and shows how to become friends although you are different – active/passive, brave/a coward.
The books about ***Me and Stig*** are small passion dramas. In ***I Like Stig,*** Eva Lindström manages to describe such a complex feeling as jealousy in small words and expressive illustrations. Lindström's pictures create a world of its own. Her figures are huge with rounded or square somewhat sullen faces. They form vulnerability and expositivity, but also warmth and happiness. She uses a perspective from down under and things are spread over the surface on top of each other in a very deliberate composition with no depth. Details turn up over and over again, leaves, snails, and worms, a rope that winds over to the next page, a cat in the background… Dark soily colours and naivism. Lindström knows a lot about the human mind – love pain can be eased by chocolate…

Good picture books have something for every reader; for the four years old child as well as the forty years old adult. We all carry a need to be understood and comforted. Eva Lindström gives an on-the-spot account from every day's life anywhere, anyhow.

Lene Glow-Worm by *Helena Olofsson* is an essential book about mobbing. Lene is new in the class and is met by a girl who instantly gives her the name Glow-Worm. This is a rather dark story about how nasty little girls sometimes treat each other. The pictures underline the nastiness, how it feels when everybody turn their backs on you and whisper… Shows the anger and pain inside the victim that cannot be expressed.

Love, friendship and family life

Love and friendship is another important theme. Happy love, love between children and adults, between children and animals Where animals often function as metaphors, sustainable relations where persons develop deeper understanding, more existential like in the books about ***Mina*** *and* ***The Hedgehog and the Mole****. Some books describe modern varieties of family life, the divorced parent or the homosexual family.*

Anna Höglund and *Gunnar Lundkvist* have written and drawn the books about ***the Hedgehog and the Mole***. Gender perspectives, where the meticulous and dutiful Mole (the man, drawn by Gunnar Lundkvist) lives with the bohemic immaterial and immediate Hedgehog (the woman, drawn by Anna Höglund). The Hedgehog lives nowhere, so the Mole invites her to his home for pancakes. They are totally different (two different sexes). The books are about the need to be alone and the need to be together with someone at the same time without losing one's integrity, about respect and tolerance. Very humorous, indeed

In ***The Hedgehog and the Mole plays soccer*** the Hedeghog wakes up early, finds a football and starts to play on her own. The Mole, who has just fallen asleep, wakes up and watches the Hedgehog score one goal after another.

- What kind of rules do you use, he screams.
- My own, the Hedgehog answers.

This is about relations on a high level – love or friendship like an old marriage, but in the small format and with simple pictures and words. Under the surface much is left for the reader to reflect upon. It is easy to misunderstand each other in any relationship.
Books like these can be read by adults and children on different levels. Everybody finds something just for her/him.

In the books about ***Mina and Kåge***, *Anna Höglund* reflects the complexity of love.
How do you meet each other's dreams and wishes in every day's life? In ***Mina in China***,
the little bear Mina reads about China. She gets a strong pulling feeling that she can't resist – she has to go to China while Kåge is rather irritated. Anyway, Kåge helps her getting ready for the trip instead of putting up hinders. The sooner she goes, the sooner she will come back home. In the end they are both happy. They know who they are when they are without each other, and they still want to live together.

Picture book wisdom!!!

Cecilia Torudd has described family life in her comics about The Lonely Mother. In ***The Troll Daddy*** she extends the theme and includes the father as well. This is the story about the mother who is living alone with her son, but realises that the son needs his father. They walk all the way to meet the daddy way up in the mountains. The daddy is a loving father, but irresponsible. He drinks rather than takes care of his family. However, any son needs a daddy to look up to, and that is just what the son gets, although he is clever enough to realise that the father has his weaknesses. So the mother and her son walk home again, remembering the father understanding that such a father is better to have in mind and at a distance…

The Fairytale about the Very Greatest. What is greatest in life? Love, of course.. *Gunna Grähs* describes a middle-aged man with a ponytail, blue jeans and a motor-cycle jacket who meets love in a pizzeria.

Lovely brown eyes and kissable red lips placed on a lady with an exotic look. How he falls in love is just wonderful to read about.
Gunna Grähs co-operates with *Thomas Halling*. They have made three very modern books, varieties of the old fairytale about ***The small small old woman*** by *Elsa Beskow*. Between the new books and the old there are 100 years of picture book development.

Separated worlds – the child and the grown up

A basic theme in many picture books is the differences between children and adults. They live in totally separated worlds. Many of the picture books of today describes how it feels to be small and very young. For adults to remember childhood, how they thought and felt. What was important then? Perhaps books like these can help us adults to bridge the gap between the infant and adult worlds.
It is not unusual to use animals as humans in picture books. Animals as metaphors can make it easier to express complex matters? Many of these stories are just fables although they include their messages inside the story, not as a final sense moral

When Daddy showed me the universe by *Ulf Stark* is illustrated by *Eva Eriksson*. The perspective is totally childish as remembered by an adult. Eva Eriksson catches the mood of the fifties perfectly. Her pictures are very sensitive, full of small comments to the reader. Her illustrations expand the words, communicate with the reader. The story is about the father and the son who takes a walk in the evening. The son's eyes are looking in a totally different direction than the father's - children and adults don't see the same things. While the father wants to show his son the huge universe, the son prefers to look at snails, the grass and other more close things. High and low in the same book, marvellous.

.Pigs instead of children is a theme that *Eva Eriksson* and *Barbro Lindgren* have used to describe the child – adult perspective, how it feels to be small and misunderstood.

Eva Eriksson returns to her own childhood and describes in ***Malla goes shopping*** the good old fifties when people in Sweden felt secure. Malla, the pig-girl, goes shopping with head high, but she comes to the shop, she has forgotten what to buy. The problem of being a child in a shop is very sufficiently illustrated. Children are smaller, they are not visible and become very shy when they forget what to buy. It is however allowed to fail, and behind Malla there is a very wise, understanding grandmother.

Bonny's had enough by *Barbro Lindgren* and *Olof Landström* is about another pig. Benny thinks that everything is just awful. His mother is cleaning the house and quarrels all the time. Benny runs away, but where shall he go? Nobody cares about him. Olof Landströms pictures are characteristic and humorous, full of attributes from the 90s. The coldness spread among people (animals), and warmth is nowhere to be found. Benny returns home. At least he has got his mother.

Children's needs are difficult to understand by adults. And needs of animals. Animals and children therefore have a lot in common, and friendship between child and animal is rather common. Typical books in this genre are the books about ***Max*** and ***The wild Baby*** by *Eva Eriksson* and *Barbro Lindgren*

Life and Death

Picture books are able to deal with rather difficult topics like death and other existential matters. The unique concept of words and pictures co-operating to make the expression may be the reason why...

In *Barbro Lindgrens* latest picture book, ***Gunnar the Angel falls Down*** illustrated by *Charlotte Ramel* deals with death and the wish that the beloved ones you have lost one day shall be resurrected. Gunnar, the Angel, has a magic ability – he can wake up the dead, nothing is impossible in the mind of a child…

The black Violin by *Ulf Stark* and *Anna Höglund* tells about Death himself, who is scared away by the music played on a black violin with love for a dying sister. All night until morning her brother plays unlimited melodies. This is really a picture book, a perfect combination of icons and words. Sensitiveness is there; the small but efficient changes in colours and shapes, the sharp contrast between hope and death. Finally Death himself, a figure who loses his definite mission, can´t resist his feelings and lets the sister survive.

Ulf Stark has also written ***Little Asmodeus***. Even this time *Anna Höglund* have created the pictures (interesting team, indeed). In Hell, the Devil has problems with his son, Asmodeus. He is a kind "person" and is forced to prove his evilness to his father. The devil gives him a mission, sends him to the earth to win the Devil a soul. This story corresponds to old stories and fairy tales, is very intertextual. Anna Höglund's pictures make it really suggestive. Fear mixed with humour associates to the Dante Inferno. Do you think Asmodeus will manage to find a willing soul?

Good books for the very small – true pieces of art

Books for the very small are important. I sometimes get the feeling that as long as you use cardboard paper, strong colours and some animals, everything is OK. I often miss the good story, the clear intention to tell a story where words and pictures support each other. Oftentimes it is the illustrations that save the books for the infants. The stories are too thin...

A good book has got to have a story or an obvious context. There has to be a thread to follow on a low level of abstraction. The linking to the next picture or page is essential for understanding. There must be a flow from the cover to the pages – into the book. Browsing itself shall be like in a movie where the links between scenes are the elements that push the story forward. A picture book must be a mixture of words, pictures and browsing, completing each other.

The **Rabbit-books** by *Lena Andersson* are devoted to children. They express a deep knowledge about children's needs and perceptive abilities. The whole books stick together and there are always interesting conclusions.

The **Max-books** by *Barbro Lindgren* and *Eva Eriksson* are other examples of the same thing. The first appeared about 30 years ago, and they are constantly reprinted in new editions.

More innovative and extremely modern are *Anna Clara Tidholm´s* ***Monkey Fine*** and ***Read Book.*** They are two-word books where the colours have essential roles to play.
In Monkey Fine the colour is warmly red inside home while it changes to chilly blue/green outside the house. Sentences consist of just two words, like: "come rain", "high mountains"... They are obvious, simple and entertaining, just what children and parents need.
Tidholm´s pictures breath dreams, and in every cow's eye, there is a sorrow – the complexity and deep poetry is really worth a study of its own.

The very best picture books for small children shall be interesting to read time after time, over and over again. By adults as well a by children. Thomas and Anna Clara Tidholm's books belong to that category. Not the least the books about **Ture**. The name of his dog is Hey!

Boo and Bah by *Olof* and *Lena Landström* are two sheep meeting several adventures.
When the try to pick berries the ants become a problem. The pictures are almost perfect, everything is there, details and the co-operation between the two sheep. What a marriage!

Rut and Knut are two other very funny individuals. Words are rhyming, and the pictures are rather drastic; creates laughter and smiles. *Carin* and *Stina Wersén* are the artists, and the themes are all about big sister and younger brother playing together. They may be doctors, artists or just cooking. Fantasy is important, is the mother of inventions.

Lena Anderson's books about **Kotten** (and Maja) expresses the Swedish summer in bright green, yellow, blue and pink. Beautiful transparent water colours where the nuances carry much of the messages. Kotten is a hedgehog, always friendly and helpful. One day she seem rather shy, and when she finally comes out with a babyKotten, the situation becomes obvious for everyone. Lena Andersson´s books are fiction on the border to non-fiction – educational
and informative.

Experiments in shapes and colours

Picture books give the artists many opportunities to try new ideas, space for free creation and new inventions. For more than 100 years, picture books have been important media for development of artistic expressions that reaches out to many. Economically the picture book is vital to Swedish publishers, articles even for the export market. Picture books are the most popular books in Swedish public libraries.

A picture book has a flow, a logical order in which the pictures and the words correspond, an arena for experiments in colour and shape. Books from recent years are brave, bold and full of vigour. Some have great similarity to cartoons and it is not unusual that some illustrators also do cartoons. This enables the child to experience many different artistic expressions.

One of the artists is *Joakim Lindengren.* His pictures are somewhat burlesque, have a weight and are not ingratiating at all. They are however very interesting with many references to art and literature.
Daddy Dog written by *Håkan Jaensson* is a good example. The daddy is suddenly gone and seems to be replaced with a dog with the father's tie round it's neck. Is daddy transformed to a dog?
Majvor Persson Malm's modernistic drawings in ***The princess and the moon*** give a very special character to the saga. The words are written by *Osna Opatowsky-Wahlberg.*

Is everything possible to do with a fairy tale? Yes, if the result is good and there is an idea, I think new inventions are both amusing and developing. In the new millenium version of ***Goldcn Curl and the three bears,*** Majvor Persson Malm has managed very well. Her speedy pictures are amusing to watch. The three bears carry and use many of the attributes of the new age, cellphones, lap top, designed furniture and sunglasses. Naturally the bears are off shopping while Golden Curl arrives at their house. The connections to the classical fairy tale gives many revelations and comments on our time.

Humour is the key

Humour is another obvious feature of today's Swedish picture books and can be found even in books about serious matters. It is expressed on many levels and formulated in several ways, but most often the pictures make the humorous comments on the story. One of my favourites is:

The Hungry Handbag by *Katarina Mazetti* and *Maria Lindhagen.* A very bold and poisonously green handbag made of crocodile skin eats everything that comes in it's way.
Even cellphones. It is smart too. The owner, Svea Svan, forgets things and have a rather bad sight, but manages in mysterious ways to get out of many complicated situations.

Just as funny is ***Glossa's Café*** by *Pija Lindenbaum.* To be a mean which can be boring.
So Glossa starts a Café up on her mountain. It is however very difficult to keep her fingers away from magic. She transfers the postman to a sparrow. She does a lot more, and in the end nobody dares to visit the café. The pictures are drastic, fully of mimicry and really moving. You can feel the heat and the burning sun up on the mountain where Glossa lives (looks like Greece to me). The witch herself is huge

and ugly. Believe it or not, but she is slowly changing towards becoming a better and nicer person, although she gets help from the outside. Nothing in this book is for sure, and life contains many dimensions. Not everybody who is transformed by the witch wants to become normal again…

Pernilla Stalfelt likes to deal with odd issues in her books. It all started with ***The Hair Book***. Since then she has made ***The Poo-Poo Book***, ***The Small Worm Book, The Locomotive wolf*** and more. Pernilla Stalfelt deals closely with hairstyles and all places where hair may occur, different kind of faeces and worms. Even the fantasy animal The Locomotive Wolf is almost scientifically described, nice and dangerous at the same time. This is humour dealing with matters that every child think of.

Another very special book is ***Nude bottoms***. This book by *Martin Olcza* illustrated *by Anna Sandler* makes many children and adults laugh together. Where and when should clothes be worn? While skiing? Yes! In the sauna bath? No! This is illustrated by a nude lady skiing and a very well dressed person sweating in a sauna bath. The nude bodies look very healthy to me, not slimmed like models, just ordinary fat or thin bodies that anyone can identify with.

Picture books are dealing with many difficult questions? Questions that cannot be solved and we therefore must accept and live with. Maybe these feelings are easier to express within the concept of the picture book?

I believe that the co-operation between words and pictures creates a new dimension that reaches out more easily and touches us more strongly. The picture book allows open endings, and what cannot be told in words can very well be expressed in the pictures. Even very difficult topics like death can be dealt with in a picture book.

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Early provision and services for pre-school children in Croatian public libraries

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In Croatia library initiatives to offer as many activities as possible in relation to children's reading have been an issue for more than thirty years. Special status which was given to the children's departments in public libraries, as early as the 60s, has influenced numerous changes concerning library users and particularly children. Until then children accompanied by their parents were visiting libraries with the intention of borrowing books, mostly school required reading. Children's libraries were mostly empty because children used to prefer other activities (e.g. watching TV programmes) which for them used to be a more convenient way of spending their free time. It was quite obvious that children were supposed to be offered something more attractive that will be a reason to spare some of their free time in a library and it was obvious that for keeping the children's habit of borrowing books and visiting libraries, these habits has to be supported from the earliest possible age. During the 60s no more children come to the library only to borrow books but to engage in various programmes and activities, directly or indirectly related to books and reading. It was especially the case in the 70s when public libraries started to work with pre-school children.

The appearance of pre-school children (in Croatia that means children from 0 to 6, including babies, toddlers and pre-schoolers) as users in public libraries has reflected the understanding of the community that the pre-school age is important for the total development of a child. At that early age the child learns most about himself/herself and the world that surrounds him/her. The child learns how to behave socially and how to communicate, establishes his/her system of values, learns about the world and himself/herself in it and starts getting into the habit of using a library and a book that can later develop into a constant need for a library and a book. For that reason, children's libraries in Croatia have changed the established methods and contents of work. They have adapted them to the youngest population that cannot read, so that pre-schoolers will find something for themselves in the library. As play and toys are characteristics of pre-school age and toy is the most appropriate thing to approach a child because of its irreplaceable position in childhood, playing activities, toys and games, have gradually become the method of work and the first media of communication between a child and a library. Everything started in 1976 when the Medvescak Public Library in Zagreb ran a toy lending service (called IGROTEKA) and organised playing activities for pre-schoolers and their parents (called IGRAONICA).[1]

Those programmes were run with four main aims:

1) to bring the library closer to the interests of pre-readers and their parents, and to strengthen reading and reading habits in the family and out of it;
2) to offer the possibilities of participating in organised out-of-family educational activities (playing, socialisation and early child development stimulation);
3) to increase the quality of life in the local community;
4) to answer on the right of each potential and actual user, no matter what age, an appropriate library service.

The Medvescak Public Library covers a district of Zagreb with some 50,000 inhabitants, but it is open for the whole population of Zagreb without reference to the district they come from. The Library functions in two locations (one in the city centre with departments for adults and for children, and the other as the branch - a small children's library located in Northern part of the city). It registers some 15,000 members annually. One third of them are children, and some 800 are pre-school children. Until 1993 pre-schoolers could become members when reaching three years of age. But in autumn 1993 a program called "playing activities for babies and parents" was started for children up to three and their parents. Consequently, there is no age limit for registration.

On registration, children receive the rights to borrow toys and picture-books and participate in the programmes they want to and whenever they wish. On the occasion of each visit they can borrow three picture-books and one toy for use outside the Library for three weeks, as well as parents who can borrow one book from the special book collection for parents, no matter if they are the members of the department for adults. Daily opening hours are 8.00 a.m. to 7.30 p.m. Registration of children and circulation of toys and books are run by librarians and during the playing activities children are supervised by pre-school teachers who are the members of regular staff.

At fixed times of the day (2 – 4 on each location) playing activities in IGRAONICA are organised and it lasts two or three hours. In addition to playing with toys some other activities like story-telling, drawing, painting, modelling, singing, puppet-shows, drama plays, some computer games and the like are organised. All possible media are used in work with children, like picture-books, children's magazines, cartoons, toys, games, puppets, audio and video cassettes and CD-ROMs. That is why the whole space for pre-schoolers could be seen as pre-school multimedia corner.

Children of different ages play together and parents can leave them under the supervision of a pre-school teacher if they wish. They are also invited to join the activities if they want to (about one fourth of parents do). Some parents just sit nearby and watch how their child behaves in play and communication with others. Some of them look at the toys and picture-books that children are to borrow, go to department for adults to choose something for themselves, or sit there and exchange experiences with other parents. Others read something of their own choice or popular literature on child development and education. For that purpose, parents are offered a range of educational materials in a "parent's corner" (newsletters, books, journals, written materials and leaflets, bulletins with annotations and picture catalogues of toys ready for lending). From time to time parents can join organised discussions and talks under the guidance of experts.

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[1] IGROTEKA in its meaning is borrowing of toys ("IGRO" means TOY and "TEKA" defines the place where something is landed) while IGRAONICA defines the place for certain activities – the place for play ("IGRA" means PLAY, and "ONICA" indicates the place for some specific activity).

Analysis of research data collected in Zagreb (1999) on parents of pre-school children attending five kindergartens from various parts of Zagreb, which are the users of children's library, show that 54 % of parents consider library activities to be very important in fostering the interest of pre-schoolers for books and reading at home.

Daily visits to playing activities (IGRAONICA) for pre-schoolers is from 80 to 100 children and more that 150 come to the library during the day just to borrow picture-books or toys.

Toys in toy lending services are processed according to common library rules. As the management and data processing of the library is computerised, toys are assigned numerical codes. They are catalogued by the international standard ISBD(NBM) and put in a database in the UNIMARC format. Toys are classified in ten groups (toys developing motor skills, those developing receptivity, educational toys, constructive, technical, imitative, sensoric, work-habit, show-expressing and team-toys). There is also defined the approximate age of child they are intended for. Children borrow some 7,000 toys annually.

Since the Medvescak Public Library has started with programmes for pre-school children the number of library members has multiplied several times. Analysing all the benefits brought about by the introduction of programmes for pre-schoolers in public libraries, could be described as follows:

- the library benefits from an increase in membership, both children and adults, and in an increase of interest for other library programs and services (sometimes parents come to the library for the first time when receiving the invitation to bring the child);
- the benefits for a child are that such programmes stimulates his/her full development, and especially through developing the habits of reading and using the library;
- parents profit from a library programme for pre-schoolers as in their increased interest in other library services for adults; in getting support and advice on how to strengthen family reading; in the opportunity to educate themselves in the parental role and get support in raising the child;
- the benefits for a community as a whole are in better quality of life of families and in filling the gaps in some other public services that miss at local level.

The idea of using toy as the media and play as the method of work in the public library has been transmitted to the majority of public libraries in Croatia. Today, there is no children's library in Croatia without at least a small facility for pre-schoolers, nor without at least some activities for this age group. But, there is still only a few toy-lending services in Croatian public libraries as they are very demanding for staff and financial investment. The spreading of idea of services for pre-school children in public libraries has been markedly supported by the *Standards for Public Libraries in the Republic of Croatia*. The Standards appreciate the pre-schoolers as library users and prescribe the space, equipment, staff and library materials needed to meet the needs of the youngest population in public libraries. But in practice, the activities for and with the pre-school children depends very often upon the enthusiasm of the staff who are aware that their investment in the youngest will be abundantly returned by the developed culture of reading and library usage.

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Early years developments in France and beyond

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A colleague from Latin America was invited to present the situation of library services for the very young in this part of the world. Unfortunately she could not attend our conference. So John asked me to present the situation in France. I have accepted because the French experience I am going to describe has something to do, in someways, with this continent.

I could give an overview on library services for very young children in my country. But actually, in many aspects, the library services for the very young in France are basically very much the same throughout the western and northern world : public libraries are widely open to the very young, to babies, parents and child minders. Every publishing house has its collections for these "newcomers" etc. Training sessions, special bookfairs are organized throughout the countries about what we call "le bébé lecteur", the baby reader. Sometimes, we are even afraid that this new population in our libraries, absorbs, on a too exclusive manner, the attention we should give also to other children.

My paper shall concentrate on what appears to me an important movement, initiated in France, about 20 years ago, and which is, for the time being, one of the major inspiration for children's librarians in my country. It has a strong impact on the work carried out in libraries with the very young, their parents and caretakers. This movement is giving a new dynamics to children's library in France, but not only. Its influence is gradually reaching other countries and help librarians to think of new strategies for reaching marginalized groups.

ACCES is its name. This acronym means access : Actions Culturelles Contre les Exclusions et les Ségrégations. Cultural actions for preventing (or against) exclusions and segregations.

It has been initiated by an eminent psychoanalyst René Diatkine, together with colleagues of his, and more generally, pediatricians and mental health professionnals. René Diatkine had a long experience of therapies of children coming from immigrant families. He had observed the major role of stories, reading and books in children's therapies. That is why, when he created the first nucleus of his association, he asked some children's librarians to join and play an active role.

So the first characteristics is that this movement deeply affecting our profession of librarians comes from other professions aware of the potentialities of our institution ; these professions being usually not considered as traditional partners of libraries, like schools for example. Their immediate interest for our institution shows a strong wish from these therapists and researchers to give a cultural dimension to their project. They are clear about it : the association is not dealing with psychotherapy, bibliotherapy or psychology. For them, cultural proposals, cultural activities are essential for preventing segregation and exclusion. Reading pleasure, literature and art are
important factors for an harmonious development of the person and contributes to a better insertion in the community.

What makes this movement important and relatively new for our profession is that it associates librarians, especially the ones who have a daily practice with children with researchers coming from various disciplines (mental health, anthropologists, linguists, pedagogics, etc.) who precisely are interested in this practice. It is a tremendous stimulation for making our work at the grassroot level more and more conscious, responsible, interesting. It helps to be more imaginative and
creative. Instead of routine, we may be in a constant progress.
Library is recognized, as a place where children can live important experiences thanks to books, to people who share reading with them. Getting to know these "live experiments" is important for this researchers, because any serious researcher needs to refer to experiments. We shall see later how we, as librarians, are invited more precisely to contribute.

For us librarians, it is important to have our everyday practice supported by a theory which is permanently based on our own practice. It helps to be clear about the reasons of what we are doing.

Another characteristics of the members of this group is their motivation which meets ours : cultural actions against segregation and exclusion. Together with Emilia Ferreiro from Mexico, former assistant of Jean Piaget, they have noticed that all children during the first five years of their life may equally enjoy the pleasure of stories and books, whatever the socio-economical background of the families. It supposes they have an early access to literature, it means, to "written language", the language of stories and books, different from the strictly utilitarian language. (The same observation was related in Margaret Clarke's excellent book : "Young fluent readers", ed. Heineman). Disparities, differences, inequalities appear later, when children enter school and meet social difficulties. Also important is for the children to grow with people who take time and/or show real interest and pleasure for reading and talking with them. We know that
these favorable conditions are more exceptional among deprived communities.

These consideration, confirmed by most observations, bring ACCES to formulate some points which should guide our practice as librarians, especially when working in marginalized communities.

1. it is important to help parents and caretakers to be aware of their children's ability to enjoy stories and books. For this reason, emphasis is put on the necessity of presenting books and sharing stories when these adults are present. This necessity being especially important for uneducated and marginalized people, so that they can overcome their reluctance towards books and reading. Professionals of early childhood or daycare centers may, this way, become interested and, as collaborators, take over this task in their daily environment.

2. considering that these parents do not attend libraries or any cultural institution, the idea is to look for places where nobody would expect to find books and where parents and their little children are supposed to wait, to have time, to be bored and feel like browsing... Preparing unexpected encounters with books is one of the concerns of ACCES. It is the necessary first step before attending a library. Waiting rooms of Centres de Protection Maternelle Infantile are good places, because, there, deprived mothers have to go there for health consultation for their babies and themselves. It is compulsory . In some rural departments, in connection with the public mobile library, the little bus ACCES for medical consultation presents some collections of children's books for mothers who would not spontaneously use the regular bookmobile.

3. ACCES insists about the quality of services, professionalism, training, partnership. They are very strict about the literary and artistic quality of books, because they noticed that babies and very young children's make very early the difference. Tight cooperation with libraries and other existing institutions is important for a long term action. Librarians learn also from health professionnals and gain from the variety of representations and experiences of reading observed in various contexts with people coming from different professionnal backgrounds. ACCES is, for this reason, encouraging the building of networks associating different institutions and groups, children's libraries being the permanent central point. The example of its project carried out in Paris is a good and successful experience. If necessary, we will tell more about it.

4. Permanent reflection on work and practice ; tight links between theory and practice, priority to grassroot work are the most essential aspect of this cooperation. Here come new responsibilities for children's librarians . It is an absolute necessity in our time of quick and radical changes, if we want to be efficient and not to rely only about a priori or practice thought for middle class children of another time. We need to up date our practice.

Here is for us the main contribution of ACCES. Some eminent psychoanalyst like René Diatkine, or the Colombian linguist Evelio Cabrejo Parra from the Sorbonne, as any real researcher, have the humility and the seriousness to refer constantly to observations children's librarians are noting. They need them, just the way we need their reflections and their progressive elaboration of tentative theories, for improving our work.

In the last 20 years, as children's librarians, we have been taking a great benefit of regular monthly seminars open to librarians, professionnals coming from different backgrounds, to scientists (psychologists, anthropologists, linguists) ; all of them being deeply eager to know more about how children spontaneously experiment sharing books and stories. These sessions have been for many years conducted by René Diatkine, principal initiator of ACCES.

The first part of these monthly sessions is always devoted to one or two very detailed reports on observation of child's reactions and reading attitude. This presentation is made by the librarian or the "animatrice de lecture" who has shared the reading of the book with one child. Then,
under the leadership of René Diatkine or another theoretician, most stimulating discussion are carried out. Four or five times a year, ACCES organizes in a children's library, lectures and free discussions with researchers which are for us an invitation for a multidisciplinary approach, always with a clear connection between concrete experiences and theories.

This whole approach is not limited to the Paris area. In various parts of France, groups are being organized approximatively on the same pattern. It is also very inspiring for other countries. I believe it is even an absolute necessity for librarians working in countries where there is no long tradition of library services for children, in marginalized communities etc. I am involved in a Latin American project, initiated by

Cerlalc, an organization which has its headquarters in Bogota and is promoting reading in this part of the world including the Carribeans. The aim of this project is, within a network, to help children's librarians from various countries to think of new strategies for reaching children and families who do not have a access to libraries and books. We have started with the very young, for various reasons. Among them, there is the fact that parents are the first partners at this age. In so many countries, reading seems to deal only with school work and curriculum that enjoyable family involvement is important. In such work, it is not too difficult to involve a variety of adults. It is a good way for spreading interest for reading.

We appreciate also the fact that librarians naturally share the reading of books with the very young, not lost in a group but most of the time for one or two children. Here are good conditions for observing the child's attitude. This sharing and observation is a way for the librarians to know better what books should be selected. Thanks to all these observations, the value of library work with children at the grassroot level increases. It makes librarians more responsible and give them the desire of a constant improvement. It gives to the library a real dynamism and a new and very positive image. It is interesting to note the impact of ACCES approach in this Latino-American network. Quite a few of librarians working under difficult conditions are taking time for writing their precise observations. Exchanges are made easily through internet and it is a tremendous stimulation.

It is a start, just a start : children's libraries must offer services for children of all ages. This type of work I have been trying to explain gives an idea of what should be our work. Children's librarians, whatever their level of responsibilities, may be involved in a truly scientific work. Of course, with older children, we have to look for other ways, other solutions. But it reminds us that the first duty for a librarian is to be as closed as possible to the children for positive observation and attention to their needs and desires. It is important for the child to be listened to. He feels stimulated. As for us, librarians, it prevents us from relying too easily on general and out of date a priori.

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Recent early years library initiatives in the United Kingdom

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Introduction

There have been a number of influential initiatives which have been introduced in the UK in recent years which are helping to introduce books to babies and pre-school children.

Some of these, like Bookstart, specifically target the introduction of books to babies, via parents. Others, like Sure Start, are targeting families with children under four years of age and cover a range of aims, including improving learning. What both these schemes have done is to introduce the element of partnership involving libraries and other organisations. These partnerships are now being formalised in what are called, Early Years and Childcare Development Partnerships in which libraries are playing an important part.

Bookstart

The Bookstart scheme started in Birmingham as a pilot project in 1992 and targeted 300 families. Supported by a national organisation, the Book Trust, funding was provided to supply book bags which were given to parents when their child received their seven to nine month health check.

The project was monitored and evaluated by two institutions over a period of time and showed that:

> 97% of Bookstart parents joined the library against a national average of 58%
>
> 46% of Bookstart parents visit the library once a week against a national average of 11 visits per annum (i.e. 21%)

> 78% of parents said they read to their babies before receiving the Bookstart packs compared with 91% after

The Bookstart idea was developed and refined in other schemes until finally becoming a nationwide scheme in 1998 as a result of £6m funding from a national supermarket chain, Sainsbury's. The basic idea has remained, which is librarians and health visitors working together to introduce books to babies. A book bag is given to parents by health visitors which contains two free books for the child, plus an information pack and library joining form. Special needs children and children whose family's first language is not English are also catered for.

By the end of autumn 2000, more than 675,000 babies had been involved in Bookstart. A recent study by the Library Association found that 90% of English library authorities are now involved in Bookstart projects.

Sainsbury's funding has now finished but the Bookstart project continues to be sponsored by publishers and the Government has recently announced that it will provide funding nationally from 2004.

There are also Bookstart Plus schemes in some areas which target children older than nine months.

Sure Start

The Government is also financing another major scheme aimed at parents and children under four, called Sure Start. This scheme which runs from 2000/2004 is being funded to the sum of £540m.

The aims of Sure Start are:

> *"to improve the health and well being of families and children, before and from birth, so children flourish at home and when they go to school".*

The aim is that by 2004 there will be 500 Sure Start schemes operating in the UK, targeting parents with children from 0 – 3 years of age in areas of significant deprivation.

What Sure Start schemes do is provide parents and parents to be with better access to:

- family support
- advice on the child's development
- health services and early learning.

Where libraries have become involved, is in supporting the early learning part of the scheme. Working mainly through local authority education services, libraries have been able to build on, and extend, the Bookstart idea for this age group. Some library authorities, including my own, are appointing Sure Start librarians who can do follow-up work with Bookstart parents, or introduce Bookstart to the district involved. The Sure Start districts are very closely defined to areas of deprivation and may only involve 200-250 families.

There are very specific targets set by the Government to achieve the aims of Sure Start. In a recently published document outlining the latest wave of developments there is, for the first time, a target specifically for libraries:

> *"increase the use of libraries by parents with young children in*
> *Sure Start areas"*

What is particularly interesting about the Sure Start scheme is the multi-agency approach involving local authorities, (libraries, education and social services), plus the National Health Service (NHS), voluntary and community services, and parents.

Early Years and Childcare Development Partnerships (EYCDP)

Set up in 1998, EYCDPs bring together voluntary, private and local authority providers who offer education and day care for children. Nursery places will be provided for all three year olds by 2004 and after school care for children up to fourteen years of age.

What EYCDFs will offer, is a free place in education or day care for every eligible three year old child. It builds on previous plans and developments for pre-school children but with the added benefit of Government money to develop better facilities.

In my own authority, the Library Service has been involved in the EYCDP since it was set up. We have received money to buy large format picture books for all our main libraries, plus child development books for early years tutors. We also run training courses for early years tutors which introduce them to picture books, the selection criteria we use, story reading and of course the services we can offer young parents.

The other areas in which library authorities have become involved is in the setting up of information databases specifically aimed at young parents.

In the Library Association survey which I mentioned earlier, it was found that more than 50% of libraries responding were involved in EYCDPs.

Conclusion

Many of these initiatives which I have mentioned overlap, but in doing so they involve library authorities in multi-agency working which has a very positive outcome.

By working with health visitors in Bookstart projects we are gaining access to young parents who might not automatically join the library.

Our involvement in Sure Start projects is helping us to target socially deprived districts and reach parents unlikely to know about the value of introducing books to their children.

Finally, our involvement in EYCDPs is enabling us to improve our early years book provision , as well as reaching the early years tutors who will spread the message of what libraries can offer. In addition, it is putting libraries at the very heart of the Government's policy to improve childcare and learning for pre-school children.

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Bridging the information gap between China and developed countries: compare library information services in China and in Sweden

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Information services provided by libraries may reflect utilization level of IT of a country well.

The widening information gap between the developed and developing countries has resulted in the wide and increasing knowledge gap between rich and poor countries in the areas of science and technology. Highly recognized by Chinese government that information advantage is related to the countries' scientific competence and quality of higher education, investment from the university budget and government budget to information infrastructure has increased continuously. By initiating an integral library system from 1998(CALIS, China Academic library and Information System), traditionally isolated and separated operations of China academic libraries has been changed. CALIS subscribed databases and electronic journals by group licensing agreements to cut down the costs, built collections cooperatively, developed automated systems jointly. These libraries support their learning and research communities more effectively and efficiently than they did before.

In this study, we selected two libraries of key Chinese medical universities and a Swedish medical library. Based on the number of holding databases, print journals, electronic journals, user education courses, level of library research activities, and other services such as navigation system, biomedical links, an evaluation of information service quality was given. The conclusion is that big information gap still exists between China and other developed countries. Poor information resource is a big problem for Chinese libraries. This can be reflected by the goals of CALIS that in a few years it will struggle to satisfy user requests by 80%. Chinese librarians should pay more attention to the research in knowledge and information management. Research in utilization of information technology in libraries should be enhanced. The most important thing for Chinese libraries is that they need more competent librarians. It takes both time and money for Chinese libraries to keep the pace with the developed countries in information utilization.

Introduction

No one argues that there is a big information gap between the developed and developing countries. How big it is? With the advancement of IT, is it possible for developing countries to benefit from IT advancement much more than developed countries and thus strengthen the competence of developing countries with the rising of knowledge economy?

Over the past decades a rapid development has taken place in the field of information and communication technologies. The transformation from collection-oriented to access-oriented libraries and **information** centers is the trend of library development in the world. The information **gap** between the developed countries and developing countries is widening and has resulted in a wide and increasing knowledge gap in the areas of science and technology. The gap between the information poor and information rich is widening and continues to divide the developed and developing countries.

Academic libraries in China are supposed to collect, manage and provide information resources that serve university teachers, researchers and students. Traditionally their operations are isolated and separated with limited information resources. By initiating an integral **library** system from 1998(CALIS, China Academic library and Information System) to connect all key academic libraries nationwide, and to connect with other information networks abroad, their information services are significant enhanced. Till now total 61 key Chinese university libraries are participating CALIS. CALIS subscribed databases and electronic journals by group licensing agreements to cut down the costs, built collections cooperatively, developed automated systems jointly. These libraries support their learning and research communities more effectively and efficiently than they did before. Shanghai Medical University Library (SHMUL) is one of CALIS members.

In 2000 I was financed by Chinese Education Ministry to study in Karolinska Institutet Library(KIB) for 1 year. Karolinska Institutet is a famous medical university in the world. KIB is the National Resource Library for medicine, dentistry and nursing research in Sweden. My library, Medical Library of the Chinese PLA(MLPLA), is one of the biggest medical libraries in China. By comparing the library holdings, information services, the ability of utilizing new information technology, research activities, and the library staff quality, some big differences were found between Chinese medical libraries and Swedish medical library. These differences are resulted in not only because the culture difference, economy condition difference, but also because the different development level of the libraries. In general the difference is that Swedish libraries are information rich and access-oriented libraries while Chinese libraries are information poor and still collection-oriented libraries.

I would like to take medical libraries as example to present my personal opinion.

Purpose of this study

To compare quality of information services provided in Swedish medical library and Chinese medical library, to judge the information gap between China, an eastern developing country, and Sweden, a western developed country.

Methods

- How many databases are provided by library?
- How many user education courses do the library provide? What content is it?
- How many current journals are available in library?
- How many electronic journals or full text available?
- Are there any extensive services in IT?

Two top Chinese medical libraries and one top Swedish medical library are selected to compare with..
Shanghai Medical University Library: http://202.120.76.225/
Medicla Library of the Chinese PLA: http://www.mlpla.org.cn/
Karolinska Institutet Library: http://www.kib.ki.se

Results

I. Difference in library collections

In information resources, Chinese medical libraries are information poor and collection-oriented. Swedish Medical Libraries are information rich and access-oriented.

Information resources are very important for library's information service. Most scientists rely on academic journals to keep them on the cutting edge. Without excellent libraries they can't really excel at the front line of his/her research field. An effective and efficient information support system can keep them as up-to-date as they should be. The ideal online resource for scholars and scientists would be: all papers in all fields, systematically interconnected, effortlessly accessible and rationally navigable, from any researcher's desk, worldwide for free."

In China poor information resources have limited the creativity of Chinese researchers. Skyrocketing costs have forced most Chinese medical libraries to slash journal subscriptions and made many medical journals are getting harder to find in 1990s. In the year 1999, only about 3500 journals published by Taiwan, HongKong and foreign countries were subscribed in China.

Highly recognized by Chinese government that information advantage is related to a country's competence in science and technology, and higher education quality, funds from the university operational budget and government budget to information infrastructure increased. A national consortia CALIS makes it possible to afford databases that previously could not afford. Hopefully these libraries will support their learning and research communities effectively and efficiently. Yet the situation still needs to be of improved.

This problem seems not so serious in KIB because of better finance condition. Using access codes issued by their institutions, professors and students in Karolinska Institutet are able to print full-text versions of journal articles from their desktops. KIB provides links to articles in full text with databases of Pubmed, Web of Science, and Chemical abstracts. It facilitates the important change from a print to electronic information environment, supporting research by providing desktop access to scientists.

This kind of service is not available in Chinese medical libraries. Chinese users can only use these databases and full text articles separately.

Comparison of the Latest Shelved Journal Issues in the Two Medical Libraries

(Checking date: February 2, 2001)

Journal Title	ISSN	Year, vol, Issue (MLPLA)	Year, Vol, Issue (SHMU)	Year, vol, issue (KIB)
ANNUAL REVIEW OF IMMUNOLOGY	0732-0582	1999; 17 CD-ROM	---	2000; 18
ANNUAL REVIEW OF BIOCHEMISTRY	0066-4154	1999; 68 CD-ROM,	1999,68	2000; 69
CELL	0092-8674	2000; 103(6), Dec.8,2000	2000□103□4□	2000;103(7), Dec.22,2000
NATURE GENETICS	1061-4036	2000; 26(4)	2000□26□1□	2000; 26(4)
NATURE	0028-0836	2000; 408(6808), Nov.2,2000	2000□408□6813□	2001; 409(6819), Jan.25,2001
NEW ENGLAND JOURNAL OF MEDICINE	0028-4793	2000; 343(24), Dec.14,2000	2000□343□21□	2001; 344(5), Feb.1,2001
NATURE MEDICINE	1078-8956	2000; 6(12)	2000□6□10□	2000; 6(12)
ANNUAL REVIEW OF CELL AND DEVELOPMENTAL BIOLOGY	1081-0706	1999; 15 CD-ROM	---	2000; 16
CURRENT OPINION IN CELL BIOLOGY	0955-0674	2000; 12(6)	---	2000; 12(6)
SCIENCE	0036-8075	2000; 290(5494) Nov.10,2000	2000□290□5496□	2001; 291(5503) Jan.19, 2001
PHYSIOLOGICAL REVIEWS	0031-9333	2000; 80(3) July,2000	2000□80□4□	2000; 80(4) October, 2000
ANNUAL REVIEW OF NEUROSCIENCE	0147-006X	2000;23 CD-ROM	2000□23	2000; 23
CA-A CANCER JOURNAL FOR CLINICIANS	0007-9235	2000; 50(5)	2000□50□5□	2000; 50(5) Nov./Dec, 2000
ANNUAL REVIEW OF PHARMACOLOGY AND	0362-1642	2000; 40 CD-ROM	1999□39	2000; 40

TOXICOLOGY				
IMMUNITY	1074-7613	2000; 13(1) July,2000	2000□13□3□	2000; 13(6) December 2000
ENDOCRINE REVIEWS	0163-769X	2000; 21(3) June 2000	---	2000; 21(6) December 2000
TRENDS IN NEUROSCIENCES	0166-2236	2000; 23(10) Oct., 2000	2000□23□9□	2000; 23(12) Dec., 2000
ANNUAL REVIEW OF PHYSIOLOGY	0066-4278	1999; 61	1999□61	2000; 62
GENES & DEVELOPMENT	0890-9369	2000; 14(21) Nov., 2000	---	2000; 14(24) Dec., 2001
MOLECULAR CELL	1097-2765	2000; 6(2) Aug., 2000	2000□6□4□	2000; 6(6) Dec., 2000
ADVANCES IN CANCER RESEARCH	0065-230X	---	---	2001; 80
MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS	1092-2172	2000; 64(3) Sep., 2000	2000□64□3□	2000; 64(4) Dec., 2000
NEURON	0896-6273	2000; 28(2) Nov., 2000	2000□27□3□	2000; 28(3) Dec., 2000
JOURNAL OF EXPERIMENTAL MEDICINE	0022-1007	2000; 192(5) Sep.4, 2000	2000□192□8□	2000; 192(12) Dec. 18, 2000
TRENDS IN CELL BIOLOGY	0962-8924	---	---	2000; 10(12)
EMBO JOURNAL	0261-4189	2000; 19(23) Dec. 1, 2000	---	2000;19(24) Dec. 15, 2000
NATURE STRUCTURAL BIOLOGY	1072-8368	2000; 7(12)	---	2000; 7(12)
JOURNAL OF THE NATIONAL CANCER INSTITUTE	0027-8874	2000; 92(16) Aug. 16, 2000	2000□92□21□	2000; 92(24) Dec. 20, 2000
JOURNAL OF CELL BIOLOGY	0021-9525	2000; 148(2) Jan. 24, 2000	2000□148□2□	2000; 151(6) Dec. 11, 2000
CURRENT	0959-437X	2000; 10(6)	---	2000; 10(6)

OPINION IN GENETICS & DEVELOPMENT				
GASTROENTEROLOGY	0016-5085	2000; 119(3) Sep., 2000	2000□119□5□	2000; 119(6) Dec., 2000
FASEB JOURNAL	0892-6638	2000; 14(11) Aug., 2000	2000□14□12□	2000;14(15) Dec., 2000
JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	0098-7484	---	2000□284□20□	2001; 235(4) Jan., 2001
BEHAVIORAL AND BRAIN SCIENCES	0140-525X	---	---	2000; 23(4) Aug., 2000
ARCHIVES OF GENERAL PSYCHIATRY	0003-990X	---	---	2000; 57(12) Dec., 2000
JOURNAL OF CLINICAL INVESTIGATION	0021-9738	2000; 106(4) Sep., 2000	2000□106□5□	2000; 106(12) Dec., 2000
AMERICAN JOURNAL OF HUMAN GENETICS		---	2000□67□4□	2000; 67(6) Dec., 2000
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA	0027-8424	2000; 97(25)	2000□97□24□	2000; 97(26)
LANCET	0140-6736	2000; 355(9220) June 10, 2000	2000□356□9244□	2001; 357(9249) Jan. 6, 2001
NATURE BIOTECHNOLOGY	1087-0156	2000; 18(12)	2000□18□10□	2000; 18(12)

Some different work contents:

- Because of the limited information resources in China and many scholars are not information-literate, librarians in Chinese medical libraries evaluate the projects for the administration to avoid repeated, low level research by given a short summary on the project
- A trusted group of scholars in different disciplines evaluate the subscription choice of journals and books each year, play an important consultant role for library's acquisition. They also write book review (in Chinese) to introduce new English books to users.

II. Information services

First, in library management
As one of the basic social unit in China, the library is supposed to be responsible for the staff in most areas of the life. Except professional development, duties of the library include many social functions and make it to be bigger and need more staff.

Because the culture difference and economy difference, Medical library in China has to spend much of energy and human resources in reading room administration. The librarians have to put the journals in order from time to time, help users to find the journals or books they want, answer different questions, and to ensure that journals or books are properly used and kept.

While in KIB, much energy and big part of human resources are spent in user consultation, the research of utilizing new IT in library services, user education and training program of librarians.

Second, in professional promotion
Chinese libraries are more academic while KIB is more pragmatic.
Salary difference between a novice and a senior librarian in China is not big. The academic promotion system plays an important role to encourage people work hard. Academic title of assistant librarian, librarian, associate professor, and professor are awarded according to the work experience, education background, published papers/books, and the available positions. Staff with professor title can differentiate from others in:

- have a respectful position
- A longer working period if they want (55 for woman and 60 for man)

The achievements and higher academic title are what most librarians in China struggle for.
The positive role of this system is clear but some adverse effects are accompanied. Usually the small project that may not lead to an achievement or a paper but needed by information services may be neglected. It doesn't facilitate cooperation and knowledge sharing among the library staff well.

In KIB, it's not necessary for librarians to publish papers. To attend international conferences is learning opportunity for them.

Third: in knowledge sharing
knowledge sharing and good cooperation among the staff of KIB create a very active work atmosphere. Their strong team spirit make its work more effective and efficient, and competent in utilizing new information technology.
Most librarians in China are not computer literacy. This has resulted in the low level of IT utilization in library services and limited the ability of information service in Chinese libraries very much.

Fourth, user-centered library service
User-centered library service is reflected in each aspect of KIB's work. The librarians do their best to satisfy different users' requests. Kind user-centered services are provided such as: group rooms, telephone answers, quick process of the latest journals and shortest shelving time, separated journal issues for many years for the convenience of users, various user education courses
In Chinese library, this idea should be enhanced and many services towards users should be improved.

Fifth, contents of library services

User education: User-education is considered as a primary library activity in Sweden. Many user-education courses aim at different specific customer groups have been developed and given by librarians in KIB for the purpose of empowering the information literacy of users. Web-based library guides and self-instruction tutorials are provided to users. Teaching materials are published in the intra web of the library for all library teachers who have then been able to liberate time from a pressed schedule and instead, concentrate on pedagogic development and creativity. Librarians involved in user-education in KIB have the opportunity to take courses in pedagogy, ensured the quality teaching skills.

III Research activities

Since 1997, some 60 projects have been run in KIB. Most of these projects are related to IT utilization. For example, evaluation and collection of medical links, evaluation strategy of e journals subscription, development of web-based teaching materials, teaching method based on webquest, text mining project which aims at to facilitate knowledge discovery.

The main research activity in CALIS is building bibliographical databases and internet navigation system. Chinese libraries have not realized the value of Knowledge discovery. In research level Chinese medical is much lag behind KIB.

IV. Extensive Services in IT

KIB's services have extended to IT field. A web agency run by the KIB with the aim of providing services in all areas of web development to the Karolinska Institutet as well as external customers. The team includes project leaders, information architects, educationalists, web designers and programmers, working together to create and maintain effective web systems.

An electronic university press in KIB facilitates dissertation publicaion. They also maintain 3 medical databases.

Most Chinese medical librarians are not computer literacy, they have no ability to provide such services to users. Many libraries' websites are not as ideal as they should be. Value-added library service is very limited in Chinese medical libraries.

V. Continue Education of the librarians

In KIB almost every librarian who involved in user education has the opportunity of continuing education in library school to improve their knowledge and their skills.

Although everyone knows the importance of continuing education for the development of Chinese libraries, it's almost impossible for most Chinese librarians to get continuing education because of education cost. There is not a systematic training program for librarians in China. This problem limited the development ability of Chinese libraries.

VI. The ability for library development

In KIB, staff use their web site as a teaching tool to support library instruction programs, use the web's interactive capacity to establish services between library users and library staff, maintain a dynamic web site to meet the needs of its users.

Different level of staff quality makes it clear that Chinese libraries have lower ability to utilize new information technology. Money shortage is another problem.

Lack of IT talents and Chinese librarians are not computer literacy with the rapid development of information technology, we can say that this information gap between China and developed countries is not static but dynamic.

VII. Future

Medical libraries of China will benefit a lot from this kind of offer:

- More and more free and unrestricted e journals available on the internet. Within 5 years, scientists will be able to access most of the last 10 years of the literature electronically, especially for the 1000 most-consulted journals. But

- An integral library system is centrally funded. By group licensing agreement, a resource-sharing network is available for most university libraries in China.
- Investment from government is increasing. China government has recognized that information advantage is related to the country's competence and quality of higher education, science and technology. Library information resources has been given the importance of "knowledge innovation and creativity support system"
- Information gap between Chinese medical libraries and Swedish medical libraries is dynamic but not static. The biggest problem for development of Chinese medical libraries is not information resources but the serious shortage of IT talents. The low level in IT utilization of libraries cannot lead to information advantage.
- Chinese libraries must hire staff with the technical expertise to work with web technologies or train their staff to obtain such expertise.

Conclusions:

In the network environment and the times of knowledge economy, Chinese libraries should draft new development strategies regarding the ideas, facilities, resources, and its services.The transformation from collection-oriented to access-oriented libraries and information centers is the trend of library development in the world. To bridging the information gap between China and developed countries, organizing training and other forms of continuing education of librarians must be taken into account.

With the increase of investment in libraries, I'm confident that China can have a great progress. The purpose of this program is to invest in research infrastructure to provide Chinese with the tools needed to conduct high level research and to stimulate creativity in research, in order to enhance China's role in the global knowledge society.

Although Chinese librarian is catching up with the development of IT by hard work, big gap still exists. Quality information service facilitates scientific innovation and information policy may influence a country's scientific competence. Information service should be improved for the purpose of the whole country's science and technology competence in the world.

By this study we can see that there is still a big information difference between China and other developed countries. The developed countries are entering "information age". It is hard for developing countries to keep up with all IT innovations. IT utilization ability in Chinese medical libraries is much lower than Swedish medical library. The ILL fulfill rate is less than 80% because of shortage of current journals in China. Chinese scholars and scientists reach fewer databases than Swedes researchers. We anticipate that libraries in China can get a wide range of advantages from internet by accessing to a lot of information and will have the ability to smooth interaction with the rest of the world. It is crucial for integration into the world economy..

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Bridging the digital divide in the islands of Oceania

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Abstract:

With the advent of the Information Age, it has become feasible to consider providing electronic access to library tools (bibliographies, indexes and directories) published in the South Pacific. That something is feasible however, does not necessarily make it desirable. To explore this further, a research project was initiated as part of a Masters thesis at Charles Sturt University to survey four countries in the South Pacific: Fiji, Samoa, Solomon Islands, and Vanuatu. The survey looked at several areas: potential formats for the delivery of current, print-based library publications; user preferences for the type of format for publications, i.e. print or electronic; the practicalities involved in information personnel in the region being able to access library publications electronically (and whether or not this contributes to bridging the digital divide); the status of telecommunications in the region, including access to the Internet; the extent of computer equipment and its use; and the skills level of library staff and users in accessing and using computers and the Internet. Knowledge gained from this survey will help determine the most suitable format for, and the best approach to publishing library publications in the South Pacific.

Introduction

Is it possible to introduce island nations in the Pacific, developing countries almost one and all, without you the audience conjuring up in your minds images of azure blue seas, endless white, palm-fringed beaches, Gauguin and Tahiti? Possibly not, so this introduction is intended to contribute to a better appreciation of the circumstances the region finds itself in, before investigating the less glamorous world of the digital divide as it pertains generally to this region, and specifically when it comes to making decisions on approaches to adopt that don't compromise the future social and economic development of the region.

The term 'Oceania' is used to designate that area that includes Australia, New Zealand and the island countries and territories of the Pacific Basin, numbering some 22 political entities. Excluding Australia and New Zealand in our definition of 'islands of Oceania', we are left with approximately 7.6 million people (0.13 per cent of the global population) scattered across an area of 30 million km^2, roughly comparable in size to the continent of Africa, and certainly larger than North and Central America combined. (Tongan academic Epeli Hau'ofa's description of the region as "a sea of islands" is perhaps closer to the mark than the perception of the vastness of the Pacific Ocean dotted with the occasional island).

Geographic considerations are critical to understanding the digital divide in this region. Even the largest nation in the region, both in terms of landmass and population, Papua New Guinea, is considered a small nation; the smallest independent country is Tuvalu, just 9,900 people on nine atolls the total land area of which is 26 km^2 . Of the 22 countries and territories, only one has a population greater than one million; 12 countries have a population less than 100,000.

Table 1. An overview of some Pacific Island countries and territories

Country	Population (estim. 2000)	Land area (km^2)	Sea area (EEZ) (km^2)	Per capita GDP (USD)
Cook Islands	18,700	237	1,830	3,525
Fed States Micronesia	118,100	701	2,780	1,281
Fiji Islands	824,700	18,333	1,290	1,621
Guam	148,200	541	218	26,795
Kiribati	90,700	811	3,550	393
Nauru	11,500	21	320	18,275
New Caledonia	212,700	18,576	1,740	22,454
Papua New Guinea	4,790,800	462,243	3,120	769
Samoa	169,200	2,935	120	708
Solomon Islands	447,900	28,370	1,340	592
Tokelau	1,500	12	290	–
Tuvalu	9,900	26	900	883
Vanuatu	199,800	12,190	680	1,017

Source: Secretariat of the Pacific Community, 2000.

Average per capita GDP in this region in 2000 was USD 4,430; this includes countries whose GDP is distorted by various factors such as a large military presence (Guam) or high-value commodities such as phosphate (Nauru) and nickel (New Caledonia). The average GDP of 'normal' countries, those relying on export of primary produce and tourism, is closer to the USD 1,315 mark (and Papua New Guinea, with its vast mineral wealth, has a per capita GDP of just USD 769). By way of contrast, the 1997 GDP figures for Africa are USD 560; for Asia, USD 730; and for Latin America, USD 4,230 (www.usaid.gov/pubs/cp2000/afr/afr_over.html).

What has been shown so far is that the island countries and territories of Oceania are geographically small, and in most cases, have only small populations. Though the region as a whole, in common with other developing countries, suffers from urban drift, the majority of the population still live in the rural areas. In most of the Pacific, this often means living on remote outer islands. The burden this places on national infrastructures is considerable: where roads are laid, they only go so far before they become rutted tracks; shipping and transportation services to and between outer islands is subject to the vagaries of the weather, deteriorating ships; electricity is not available to all, particularly if it means bringing a power line many kilometres where it ends at a village of less than 100 inhabitants; telephone distribution is similarly complicated, with HF radio sometimes the only available, reliable link. Services such as health, education and the police are more basic in the rural areas, and the quality of such services low. A modern airport, good roads, five-star hotels and Internet cafés are not the norm, but the exception.

Understanding the digital divide

The term 'digital divide' has been used to describe the gap between those nations that have utilised information and communication technologies to allow them to access the informational and decision-making resources that ensure continued economic, social and educational development, and those nations whose resources limit access to these resources, for whatever reason, and are thus unable to share in the opportunities that would otherwise be open to them. It is not just about a lack of (suitable) computers and inexpensive (and reliable) Internet, nor just about the skills needed to make best use of these resources, but it is also about basic infrastructures and thus capacity to support the introduction of the technology; it is about government policies and strategies in the long-term; but most of all, it is about content, about access to content that is relevant and timely, delivered in an appropriate manner. Inevitably, the digital divide has come to be seen as just another manifestation of the gap between the 'haves' and the 'have-nots', between developed countries and developing countries, or between the North and the South.

How the developing world is able to participate in the new information age has come to be seen as a defining moment for the world as a whole. Indeed, bridging the digital divide has been taken up at the highest level by various international agencies such as the World Bank, Unesco and the United Nations, culminating in an appearance at the G8 Meeting on Okinawa in 2000. There are suggestions that bridging the digital divide will increase democratisation in nations, will facilitate greater participation by citizens in developing the social and economic aspects of societies as well as their own stake in society. Bridging the gap is seen as the digital equivalent of the right to freedom from hunger.

The digital divide and the Pacific

What makes the digital divide in the Pacific different from other developing regions? One major difference, as noted already, is the geographical factor. Other differences emanate from that. A smaller population means that the provision of basic services such as power, water, transport and telecommunications infrastructure cost disproportionately more per head of population than in a more populous country. Therefore, harnessing new information and communication technologies may be considered prohibitively expensive, with the result that there is uneven and inadequate development using these tools.

Socio-economic situation in the region

The islands of Oceania are characterised as being dependent on the export of primary commodities and tourism. This places the region among those areas that are vulnerable in terms of economic stability; for instance, a fall in copra prices will impact smallholder enterprises in the region among those sectors of the community already marginalised, in the subsistence and semi-subsistence sector. Over 80 per cent of the region's population relies on subsistence agriculture for their livelihoods. As a consequence of this there is reduced revenue to support state initiatives.

Government departments are, in general, poorly-resourced and underfunded; this leads to mediocre services to the wider population, and particularly those in the rural areas. The social cost of this may have been a contributing factor to the unrest in Fiji, Solomon Islands and Papua New Guinea in recent years. While there is recognition that the issue of rural alienation and the dissatisfaction that lies behind it is a critical one, and that its resolution must have priority, there are few signs that effective solutions are being developed let alone implemented.

A burden that Pacific countries share with many other developing nations is that basic utilities are supplied by government-controlled and/or government-owned monopolies. Telecommunications companies in the Pacific are significant earners for governments through share dividends and taxes, so it is unlikely that they would want to see deregulation of the market. As a result, Internet access is available in the majority of countries, but in general it is costly and not widely distributed (confined mostly to one or two urban areas with a well-developed phone system). Only in a few countries, such as Guam, Papua New Guinea, Tonga and Samoa is there any choice of provider but this does not seem to impact on the cost.

Information resources and access in the region

In general, in the region, libraries are not well-developed despite having been in existence for decades. What is more disconcerting is that there is a lack of staff, a lack of well-trained staff, and a lack of resources. Government policies to date, in their implementation, have emphasised the need to have a library, but have not supported its resourcing, which means that many 'librarians' are constrained by working in a badly-constructed, poorly-resourced room that may not see users for weeks on end.

This situation has come about as a result of a significant lack of appreciation of the role and importance of libraries. There is little understanding of the importance of relevant, appropriate and timely information to critical decision-making. For example, a recent survey of quarantine officers in the Pacific region (to determine the feasibility of a formal training programme) revealed that a significant majority thought they had no or poor access to information, and as well a majority claimed that lack of, or poor libraries and bookshops would impact their capacity to study successfully (Walton 2001, pers. comm.). This example proves that there is a long way to go in providing access to and encouraging the use of essential information resources for the development of the region.

The solution being mooted, of course, is technology, principally the Internet. This can help overcome the tyranny of distance; it can provide better access to more information to a greater number of people at a lower cost; and it's a very topical approach to problem-solving.

A case study

An overriding factor is that in many cases, new information and communication technologies are introduced only because they can be: "This problem is the tendency to transplant technologies 'because they are there' to be transplanted" (Jacobson 1994, p. 750). For librarians and other information professionals, the challenge is to harness information technology without further alienating your users. For example, enthusiastic individuals within government departments initiate the development of web sites and other resources with little thought as to whether or not this benefits their immediate clients. This doesn't mean to say that there isn't some benefit that may be derived from these activities, it's just not the right approach. A better way is first to identify where the need is and explore appropriate solutions determined by the environment, such as the state of a country's infrastructure, the number and skills of staff and likely maintenance costs and responsibilities.

A research project was initiated as part of a Masters thesis at Charles Sturt University to explore a particular aspect of information dissemination and access in the South Pacific; namely, to find out whether it was feasible *and* desirable to publish library publications (e.g. indexes and bibliographies) electronically. Publications have been produced by the University of the South Pacific's Pacific Information Centre in print format since the early 1980s. Although computers were adopted in 1989 to facilitate the production of these publications, the availability of new technology posed the question:

would it be better to produce these publications in one electronic format or another, e.g. as CD-ROM databases or the Internet, thereby saving printing costs and providing a more useful and accessible product in terms of timeliness, searchability and flexibility? This question is at the heart of the 'digital divide' debate – the hypothesis that new communication and information technologies are presumed to bring significant benefits to more users and in better ways than ever before. That may be true, to a lesser or greater extent, in the developed world; but to what extent and how will developing countries benefit, specifically the island nations of the Pacific region? Thus the need arises to study the current situation in order to determine whether what is technically feasible is at the same time desirable, for the target group.

Survey results of relevance

Mention was made earlier of the geographical aspect unique to the island region, and that this leads to constraining factors such as the limited resource base both in terms of people and infrastructure: in particular, access to computers, access to the Internet, skills level of library staff and users, use of library publications and potential formats.

The discussion on the digital divide in the islands of Oceania is informed by these results, and those from other surveys and anecdotal evidence. The survey was carried out between July 2000 and June 2001 in four countries: Fiji, Samoa, Solomon Islands and Vanuatu. Those surveyed were mostly professional or paraprofessional librarians and information users, represented mainly by individuals conducting research; 260 completed questionnaires were returned.

Access to computers

Over the last 10 years there has been a significant increase in the numbers of computers in the region, and they are cheaper to buy. Nevertheless, more people use or have some acquaintance with a computer in their daily lives than ever before; for example, automatic teller machines (ATMs) and point-of-sale machines are found in the urban centres of most large and many smaller island countries.

Given the population being surveyed – librarians, academics and technical officers – it should be of no surprise that 98.1 per cent said they had used a computer before. Naturally, this high figure does not give any indication as to how frequently they used a computer, nor their level of competence. What is known is that 96.2 per cent have used a computer for word processing, 87.3 per cent for email, 85.4 per cent for accessing the Internet, 65.4 per cent for searching a library database and 58.1 per cent for searching other databases; only 61.2 have used computers for games and 37.7 per cent for computational activities.

Some information is known about the type (and standard) of computers in use by those surveyed. Most who responded ((79.6%) indicated that their computer was fairly up to date: Pentium processor 1 or 2, 80.2 per cent. Still, 4.8 per cent were using a 386, and 14.0 per cent a 486; these technologies cannot be described now as leading edge. Just over half the computers (54%) had 64 MB of memory, or greater; 15.5 per cent had 16 MB or less. The most prevalent operating system is Windows 98 (56.9%), followed by Windows 95 (31.5%). In terms of storage capacity, most computers (61.2%) had 1 GB or more hard drive; a very large number had a CD-Rom drive (83.9%), and a majority of which ran at speeds greater than 20x. A large number of respondents (70%) had a Zip disk drive. What these data show is that generally, the computer equipment in use in the four countries surveyed is reasonably up to date, with only a few anomalies.

Access to the Internet

Whereas having a computer may, even in developing countries, be considered the norm, the same cannot be said of access to the Internet; being well-dressed nowadays means being web-addressed.

A large percentage of those surveyed, 84.2 per cent, have access to the Internet at work; of the remainder, a similar percentage said they anticipated obtaining a connection. Given that many of the community surveyed work at the University of the South Pacific, a regional institution serving 12 Pacific Island countries, with a state-of-the-art, satellite-based intranet, the results are hardly surprising. Those among you who have used the Internet, even those in developed countries, will know that having access to the Internet and being in a position to best make use of it are two different things. This is particularly so in developing countries. The first concern is cost: are there sufficient funds to pay subscription and usage fees? In many ways, Internet access has increased rapidly in the Pacific Islands region; but it is also true that most countries have only one Internet provider, usually a state-owned even if corporatised monopoly that tends to set a high fee schedule.

Beyond the purely financial, constraints to Internet access have to do with infrastructural capacity. A large percentage of respondents stated that the Internet connection is always or mostly reliable (75.6%); very few (2.1%) said it was never reliable. However, those surveyed were mostly urban- or capital city-based and thus are more likely to experience better connections than other users. If the 'Letters to the Editor' column in *The Fiji Times* is anything to go by, there are considerable difficulties with accessing the Internet even from other urban centres that happen to be on other islands. Mostly, the complaint is that access speeds are too low or not low enough to guarantee a successful experience on the Internet. This is particularly true in Papua New Guinea where trying to access the email server from any of the five Highlands provinces is difficult to say the least. The telecommunications infrastructure is just not capable of delivering a good quality service. Of those who answered the question on access speeds, 36.2 per cent did not know their speed; 29.6 per cent had speeds less than or equal to 28.8 kbps; only 34.2 per cent had speeds in excess of 28.8 kbps, e.g. in Fiji the maximum speed from the local Internet provider is 33.6 kbps. The result of this is that accessing web resources or undertaking transactions can be time-consuming, and therefore costly and frustrating. Despite this, 45.4 per cent rate their Internet service as good, and 31.9 per cent satisfactory; only 10.0 per cent rate the service as poor.

In places where there is Internet access, the greatest use of it is for email (82.7%) and web searching (80.4%). A surprising number, 60.0 per cent, use their access for downloading files; little use is made of the Internet chat facility (13.8%). Of those who stated they use the Internet for web searching, what they are mostly searching for (78.8%) is information, however that might be defined. Only 43.1 per cent are searching library catalogues; that this is the response from a group more likely than others to be searching library catalogues is of concern.

Much comment is made of the poor supply of electricity in developing countries, with frequent brown-outs (power fluctuations) and blackouts (power outages). In the four countries surveyed, most (53.4%) stated that brown-outs were infrequent; but 22.5 per cent reported weekly brown-outs. Blackouts – the total loss of power – were infrequent also (62.1%), but 18.0 per cent reported them as occurring monthly, and 17.6 per cent, weekly. There are variations, as expected, by country: both Fiji and Vanuatu can expect to have fewer frequent power problems than Samoa or Solomon Islands. Just under half of all those surveyed protecting their equipment and safeguarded their work by using a UPS (uninterrupted power supply).

Skills level of library staff and users

It is almost universally accepted that there are too few well-trained staff in libraries in the Pacific, despite years of training programmes. It is also accepted that too few users could be said to possess 'library skills'. There is more anecdotal evidence to support this viewpoint than hard fact. What appears to be happening is that whereas there are a good number of people who have undertaken certificate and diploma programmes in librarianship (i.e. post-secondary), they remain largely unsupervised in situations, such as government departments, where their status is low and their role ill-defined or misunderstood. Only regional organisations and tertiary institutions have the resources and perceive the need, generally speaking, to equip, staff and manage their libraries effectively. As for the users, too few people in the Pacific Islands region have had the opportunity to experience quality library services, and fewer yet the advantages that new information and communication technology can offer. There is grave concern that information literacy skills are lacking in the average user.

Use of library publications

Some evidence was obtained during the survey which showed that the three kinds of library publications under consideration – abstracts and indexes, bibliographies, directories – have been used by a large percentage of respondents: 77.6 per cent have used abstracts and indexes; 75.8 per cent have used bibliographies; and 55.2 per cent have used directories. Given that the community being targeted was done so on the strength that they were 'librarians or library users' perhaps higher percentages could have been expected. Of the very few (14.2%) who never use these publications, 37.8 per cent said they were of no use to them, and 62.2 per cent said that the publications were not easily accessible.

The few who used these types of resources daily (3.8–5.6%) or weekly (9.5–16.0%) probably reflects librarian respondents; the majority though said they used these resources infrequently, at around the 50 per cent mark. Of those never using the resources, 6.1 per cent never used abstracts and indexes, 4.3 per cent never used bibliographies and 20.5 per cent never used directories. A large percentage of those using these resources did so in print format (93.4%); but a large number did so electronically (60.9%) although those responding to this question were only 61.9 per cent of the total community.

In recognition of the fact that the study as a whole has its origins in trying to determine an appropriate strategy for producing the various publications of the Pacific Information Centre, specific questions on the use and frequency of use of these print publications was included. Almost half the total community (43.8%) had used the Centre's flagship publication, *South Pacific bibliography*. Fewer, 35.0 per cent, had used the *South Pacific periodicals index*, and only 29.2 per cent had used the *South Pacific research register*. In terms of frequency of use, most did so infrequently.

Potential formats

Naturally, the question was asked: would you like to be able to access these three publications in electronic format? And just as naturally, a large percentage said they would (92.4%, 91.5% and 89.9% respectively). It is worth investigating the reasons why there was such a positive response (although one can't escape the thought that it is because this is the modern, up-to-date thing to do). A large percentage thought that publishing electronically would give speed of access (78.5%), improve searchability (77.1%) and more flexibility of access (66.4%); only 50.2 per cent gave 'keeping up with the times' as a reason. With so few stating that they did not want these publications in electronic format, there are too few responses upon which to draw any conclusions as to why not, except that a handful thought that print was easier to read.

The electronic format being proposed was not stated on the questionnaire, although two formats are being considered: CD-ROM and the Internet, i.e. a web-accessible information resource. Use of these two formats is quite high: 91.7 per cent have used the Internet; and 84.4 per cent have used CD-ROMs. The Internet is most used on a daily basis (62.0%) or weekly (17.3%); CD-ROMs on the other hand are most used infrequently (36.7%) or weekly (26.2%). Use of diskettes as an electronic medium was high (92.0%), as was its frequency of use, mostly daily (45.8%) or weekly (19.8%).

Preliminary conclusions

The results presented in this study indicate that electronic versions of library publications should be developed, thus fulfilling a need expressed by users in the Pacific region. Although a large percentage of them want this to happen, the danger is that it maintains the division between the information-rich and the information-poor, thus further consolidating the digital divide. The figures to note are those that suggest fewer than half of the respondents had used the three titles published by the Pacific Information Centre. Given that the population being surveyed was chosen to represent users of this type of information resource, the low usage may be indicative of one of several things:

- that the publications do not contain information that is considered useful or appropriate
- that the information is not presented in a useful way
- that there is little awareness of the existence of these publications.

Based on experience and interviews that were carried out with users, it is more likely to be the extent of awareness that determines usage. Further, whilst the survey considered very specific types of information and information products, experience in the Pacific region leads to the conclusion that this is a common phenomenon: too little use is made of relevant and appropriate resources in the region because of the lack of awareness of their existence and the knowledge of how best to use them.

This leads one to consider whether the right question has been asked. What if, instead of trying to determine an alternative, technological solution to disseminating and providing access to information, the question had been asked, 'In what way could more effective use be made of existing resources?' The idea is that by publishing these bibliographies as CD-Rom databases or on the Internet, it will result in a better product, which is more easily accessible and thus more useful. In other words, if we were to conclude that new information and communication technology offers a better future, then this would be masking the problem – that of too few people being aware of and using the existing resources. In saying this, however, it is accepted that perhaps the print distribution medium does not offer the best solution; but it is not unusable; it is just unused or under-used. Therefore, perhaps a solution to this is to look at ways to improve use of existing resources. This echoes concerns that *the* major constraint in the information age is that of information illiteracy.

In a recent paper, Ross Shimmon suggested that many people do not know how to find the information they need; as he says, "we are experiencing information illiteracy on a large scale, worldwide" (2001). Information illiteracy transcends both the developed and developing world; but is a more critical constraint in the developing world. In 1999, Jimba commented that in a world increasingly global (in trade, politics and culture), it is strange from a historical point of view, that the more information technology holds out a promise of a gilded future, the less advances are made by developing countries. His reasoning is that "disparities in wealth and standards of living are a function of available information and the technology to control and propagate it" (Jimba 1999, p. 81). Thus a danger to be aware of is the possibility that only elite groups will be served, as only they have the technology and ability to use it effectively, further disenfranchising the ordinary person. Any cost-benefit analysis of the desirability of publications in electronic format is without value if the analysis does not also factor in the cost of training users and their acquisition of skills to benefit from the technology.

Solutions are long-term, and involve a complete rethink of the role of education, redesign of curricula at all levels, and an awareness of the consequences of improved information literacy on individuals and societies as a whole. By definition, an information literate population is going to be able to think for itself, to pose questions and find answers, to participate in the opportunities that define a dynamic society. Solutions that rely merely on the technical, e.g. providing access to the Internet at all schools in a particular country, are only but scratching the surface; solutions that determine more precisely the needs of individuals, groups or communities as a whole, that consider carefully what constitutes an appropriate response (content, medium), and recognise that providing the skills to access and utilise these resources effectively are the only solutions that can mitigate the perceived digital divide. For example, installing a computer and providing access to the Internet in a school in rural Fiji, will be of little use to the community unless members of that community are able to use the equipment and have the necessary skills to search for and retrieve information from the Internet, information that they are able to determine as being relevant, timely and appropriate to their needs, information that they are able to use to develop their community or realise their own potential. In fact, it is not too far-fetched to say that an improvement in information literacy will inevitably lead to a reduction in the digital divide by putting technology and resources to best practical use. Improved information literacy will not in and of itself increase budgets for information services or the number and calibre of staff; it will not reduce Internet costs and improve the reliability of the phone system; but it will change national and individual priorities that accept that these changes are necessary.

It is no coincidence that for this year's Biennial Convention, the Fiji Library Association will have as its theme, 'Information literacy: pathways for Fiji and the Pacific'. This is a beginning.

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The double edged sword : a brief comparison of it and Internet development in Malaysia and some few neighboring countries in the context of digital divide

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Abstract:

This paper attempts to show that although there exists a digital divide between the developed and the developing countries the development of IT and Internet has had a profound political social and economic impact on developing countries.

Information Technology (IT) and Internet revolution are shaping the world into new polarized entities owing to the uneven distribution of wealth, physical development and literacy. Not only unequal distribution of wealth has for developing countries impeded the acquisition of IT and Internet there is a real danger that IT and Internet themselves WILL exacerbate the existing divide between developed and developing countries.

The political and socio- economic scenario in Malaysia has been affected by the emergence of IT and Internet for the better or worse. Malaysia at the beginning of the new millenium under its Prime Minister Dr. Mahathir Mohamad appears to be standing on a double edged-sword. With the inauguration of his brain child, the Multimedia Super Corridor (MSC), Mahathir is facing an uphill task in his political career and reputation. The paradox is that is while Dr. Mahathir's administration is a strong advocate of IT and Internet in the interest of economic development it fears the erosive effects on political control and influence. In short the IT and Internet are both a dream as well as a nightmare. Mahathir initiates and pushes the nation into IT, but now IT seems to be one of the reasons for his waning power.

1.0 Introduction

One of the most astounding phenomena in the past millenium is the emergence of sophisticated technological inventions. Research into telecommunication, biotechnology and other technologies have been followed by the development of products which have become responsible for both comfort and chaos, to nature and its inhabitants.

The introduction of computer technology is one of the most important developments in the second half of the last century. The computer which arrived late in the second millenium has not only become the supplement for nearly every aspects of human socio-economic endeavors but emerged has as 'a craze' for a new generation. The Personal Computer (PC) has become a mass commodity in the early 1980s in some parts of the world, transforming human life styles, ushering mankind from modernism to post industrial era and cyber era. Towards the end of the second millenium, nearly allexisting communication sectors embraced cyber technology in varying degrees thereby creating a great potential for cyber- oriented products and services.

Coming not so long after the emergence of PC, The Internet has created 'a border less world' a platform for mankind to interact, share knowledge with astonishing ease. As a result, interaction and communication from one corner of the globe to another can take place within seconds. With such potential for speed, comfort, accuracy at relatively 'affordable', cost, many people believed the world would be wholly 'cyberized' within a decade. Undeniably, the potentials of Internet or IT are so great that it is hard for any country to resist its invasion, be it small or big, rich or poor. Countries moving slowly in acquainting with IT and cyber products face a threat of being left behind economically in the near future in comparison to those who are giants in the cyber arena.

However, the relevant question to ask is; to what extent has the dream of a fully cyberized world has been fully realized?

2.0 Global Atmosphere and IT Ownership

The truth is that a transformation of the whole world into a "cyber platform" with nearly every human being transformed into 'cyber participants' has not materialize as predicted by many leading figures in the IT world a decade ago. The demand for IT products has simply not matched the global supply and information technologies have not reached every human being as predicted by some people simply because the PC is yet to reach an affordable price for most people particularly those living in the developing countries.

The PC is still seen as a luxury item for many groups of people around the globe. The fact is that in poor countries the PC is available and utilized only by some elite groups who are wealthy.

How Many On line?

The task of estimating how many are online throughout the world is an inexact one at best. Surveys abound, using all sorts of measurement parameters. However the following is an " educated guess" as to how many are online worldwide as of November 2000.

Africa	3.11 million
Asia/Pacific	104.88 million
Europe	113.14 million
Middle East	2.40 million
Canada & USA	167.12 million
Latin America	16.45 million
World Total	407.1 million

Source : *Various; Methodology*

Complied by : *Nua Internet Surveys* (http://www.nua.ie/surveys/how_many_online/index.html)

At one United Nations summit where heads of state and government ministers gathered in Geneva in 2000 it was highlighted that 88 percent of the world's Internet users live in the industrial countries, only 0.3 percent in the poorest countries of the world. (Source: The Star (In-Tech) vol.9, no.27, 4 July 2000, p.2)

The UN Development Program (UNDP) notes that between 2000 and 2001 the world will have about 700 million Internet users compared to 50 million in 1997. Contemplating these numbers, it is evident that the population of Internet users has yet to reach even 10 percent of the world's 6 billion population in the near future.

Various reasons can be attributed to the slow evolution of IT globally. The dominant constraint has been the imbalance of the 'socio-economic' structure of the world. In a world where nations are still categorized as 'rich nations' or 'poor nations'; 'literate' or 'illiterate' society, 'developed', 'under developed' or 'developing' nations etc., it is only to be expected that such disparities will have a fundamental effect on the spread of IT and Internet globally. (see illustration below)

The 1997 UNDP Report reveals the growing chasm between the rich and poor countries in our planet today. The rich nations' constitute 20 percent of the global population but possess 80 percent of the world's wealth. The poorer nations which constitute 80 percent of the world's population enjoy only a small part of the global wealth. In such an unequal world the goal of cyberizing the world must still remain a distant dream. Rich nations like USA, Japan, Britain, France, Canada, and Netherlands etc. can definitely

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provide a PC to each of its citizen but unfortunately for nations like Siera Leone, Niger, Ethiopia, Burkin, Burundi, Mozambique, Eritrea, Guinea-Bissau, Mali etc. etc. IT and cyber phenomenon is still a fantasy.

In the first place poor countries cannot easily put into place the telecommunications infrastructure necessary for accessing the Internet. Wireless technology, satellite or mobile phones among other technologies remain the privilege of he few in many countries. For example, a computer costs the average Bangladeshi more than eight years' income while the American spends just a month's wages. Using the Internet for one hour in Chad in 1999 cost US 10.50 while the average yearly salary of its citizen is US $187. The high cost of access to cyberspace in these countries, which have generally very low personal incomes, restrict usage of the Web.

Apart from the above the following statistics below convey more stark picture of the world.

- About 1.3 billion people are poor, living on less than US$ 1.00 a day
- One in four people in developing countries and one in eight in developed countries is affected by human poverty.
- Almost 1.3 billion people do not have access to clean water
- Developing countries have 60 % more illiterate women than men.

Source: **UNDP Malaysian Office** (New Sunday Times, July 18,1999, p.13)

Bill Gates at an IT conference in November 2000 in Redmond, Washington spoke passionately about how the internet was of little use to the world's poor. He said " The world's poor two billion people desperately need health care, not laptops, or wireless Internet connections or a bridge across digital divide.
In other words not all countries have the same opportunity to access technological and scientific progress. The growing power of the Internet also risks widening the divide between the world's haves and have-nots. In fact the digital divide is getting deeper between countries as most of the world is still without any access to the World Wide Web (WWW). The difference is showing up not only between rich and poor countries but also between rich and poor citizens within a country.

3.0 IT and the restrictive policies in some Asian countries

Apart from the socio-economic constraints that have hampered a smooth transition of IT and Internet globally, another great constraint on the development of IT and Internet in developing countries has been domestic policies which have crippled the free media. The media being one of the most crucial medium for enlightening the population of all nations has often kept closed and controlled by the ruling elites in these countries. On the one hand can be a potent instrument for accelerating broad based growth and sustainable development and to some for reducing poverty. The IT and Internet both can be a double-edged sword for some governments in the developing countries. On the other hand it allows any citizens to access an unprecedented degree of freedom of speech and this freedom can constitute a threat to the government.

Indonesia, India, Thailand, Philippines and Malaysia are examples of five Asian countries which have permitted the free flow of information through the IT and Internet. There is no censorship on the Internet in those countries. Apart from these cases most of the other Asian countries have responded to Information Communication Technology (ICT) in one way or another.

One response to the new IT has been to prohibit its acquisition by private citizens. This has been the approach of the more authoritarian regimes like North Korea and Myanmar which have banned the Internet altogether.

In Burma " Sales of computers are growing rapidly in Myanmar's otherwise sluggish economy. The 100-member Myanmar Computer Federation estimates that there are more than 50,000 computers in this land of 48 million people (approximately 1 per 960), one of the world's poorest. But networking between those computers and the outside world is still forbidden A 1996 law imposes a 7 to 15 years jail term for the unauthorized ownership of a modem. Burma remains one of the most heavily censored country in the world " (http;//www.firstmonday.org/issues/issue6 5/krebs/index.html)

The other response adopted by governments such as Singapore and China has been to control the use of Internet in varying degrees.

Singapore stands tall as one of the leading Internet users in the world with 45 percent of its population owning PCs. It has one of the most sophisticated communication web called Singapore ONE (One Network for Everyone). Yet the Internet is monitored and censored and it is not 'free', 'private' and 'transparent' as hailed by the pioneers and founders of Internet. In 1999 it was reported that the IT Security Unit of Singapore's Ministry of Home Affairs had monitored approximately 200,000 personal e-mails of its citizens for 'irregularities' in 1999. When The Sydney Morning Herald (dated 29 April 2000) exposed THIS scandalous state of affairs the Singapore government responded by claiming this was a normal procedure to check virus infection ! With many restrictions by the Singapore Government it is open to question whether the quantity of PC acquisition is a measure of real development.
Under the Singapore Broadcasting Act (SBA), Internet content providers are automatically licensed and given a clear directives as to what their responsibilities are. The Internet users may be required by the broadcasting authority to limit public access to 100-200 sites which the SBA considers "undesirable."

Recently Singapore introduced a new law of censorship. The new legislation is an amendment to Section 42 of the 1994 Broadcasting Authority Act. This law attempts to limit critical debate and permit the Singapore Government to declare that any foreign broadcasting service is " engaging in the domestic politics of Singapore " though the Act does not define what " engaging in domestic politics " involves. Fines up to Singapore $ 100,000 may be levied on those found guilty of contravening the new regulations.

China with 16.9 million Internet users (or 1.34 percent of its more than one billion population) is subjecting to government regulation. China makes sure that all web sites are registered with the government. Last year China passed a law on Internet crime which provides for a crack down on political dissent. It launched regulations that made web sites responsible for ensuring that users are not critical of government policy. The Chinese government wants to ensure that its Internet users do not post messages deemed "illegal" that is to say is anything against the constitution or that that "harms China's honor and interest" China's Ministry of Public Security said 1,000 Internet crimes were reported in the first six months of 2000, the same number throughout the whole of 1999.

In Indonesia it is important to observe that ex- President Suharto came to power in the midst 1960's in blood bath which resulted the slaughter of at least half a million people. He also detained without trial more than 100,000 writers, artisans, unionist and other dissidents and prohibited them from producing or promoting any form of dissent for nearly more than a decade. However, Suharto relaxed his grip when the imperatives of rapid development forced him to permit the growth of IT and Internet in Indonesia. Internet came to Indonesia in the midst of 1990s. The rapid growth of IT and its supplementary technologies ENABLED the intelligentsia to become aware the corruption of the Suharto regime. Although the number of IT users is relatively small (Indonesia has 400,000 Internet users and this amounts to 0.18 percent of the 220 million population) nonetheless it played an important role in the reformation struggle. Although it was the Asian crisis which finally spelt the doom of Suharto of his military regime the process of his downfall was in no small measure assisted by the presence of a small but influential IT literate intelligentsia. Pro democracy movement especially the students used e-mails to coordinate their demonstration and other actions.

Philippines, a nation well known for its 'people's power' movements provides more space for free expression compared to its other neighbors. It is moving to construct a sophisticated information infrastructure. There in no Internet censorship In Philippines. A country of contrasts, the Philippines has had a long tradition of subscribing to the trappings of a liberal democracy. The Philippines is also a country without secrets, even when the dictator Marcos declared martial law. This tradition has gone over to the Internet. The only dampers perhaps are the country's laws on libel and sedition.
Philippines has 500,000 Internet users, about 0.62 percent of the total population.

At the height of anti Estrada movement from October 2000 to January 2001, several web sites promoting the ouster the President on the Internet. News groups were launched for this purpose too. The Internet served as the repository for intellectual justification for the ouster of a President whom the middle and upper classes saw as corrupt, incompetent, immoral, and leading the country into an economic abyss.

Nevertheless, the effects of the Internet had to interface with other new media as well as traditional media. The other new media was cellular phone texting. This served to call the middle and upper classes to gather at EDSA. But they would not have really been aroused if they had not been disgusted with what they saw of Estrada's impeachment trial on television and by what they read in the broad sheet newspapers.

4.0 The Case of Malaysia - The Double Edged Sword

Comparatively Malaysia and its policies towards IT and Internet would seem to be much more like than a few countries like Myanmar, North Korea and China. Furthermore Malaysia is clearly ahead of many countries in terms of personal computer ownership, Internet usage (quantity) and in 'value usage of Internet'.

The Internet first made its debut in Malaysia in 1996. Since then Malaysia with a population of 22 million have five Internet Service Providers (ISP) with about 2 million Internet users. Malaysia has a fairly high level of computer usage and ownership in comparison with neighboring countries. Malaysia also has been a strong advocate of IT and the Internet. Dr. Mahathir Mohamad, the Prime Minister has an ambitious plan to transform Malaysia into an information technology center. Thus resulted in the establishment of Multimedia Super Corridor (MSC) at the cost of $ 20 billion dollars. Although in many respects Mahathir's regime does not differ much to that of Lee Kuan Yew's in terms of the curtailment of freedom and civil liberties, development has taken a different course, thanks to the ICT. The motive of Dr. Mahathir Mohamad in establishing the MSC was primarily to take full advantage of ICT for the purposes of accelerating the economic development. However to attract and secure foreign investments to make MSC a success Mahathir has been forced to guarantee that there would be no censorship of the Internet. As a result Malaysia is unable to exercise that sort of censorship that Singapore has been practicing. Moreover because of this guarantee Malaysian government is unable to adopt the sort of censorship measures which it exercises over the non- electronic media in the country.
The MSC, a large zone stretching 750 square kilometer was built as an attempt to create an Asian version of the Silicon Valley. This 750 square kilometer zone which runs from the glistening Petronas Twin Tower in Kuala Lumpur to the new international airport 60 kilometers to the south. The Corridor already contains Putrajaya, the government's new administrative center; Cyberjaya, an industrial park for high technology and software companies; and a Stanford-style Multimedia University that receives guest lecturers from such high-tech giants as Lucent technologies. The project started in the mid-1990s was to take two decades

to finish. It promised fiber-optic networks, research facilities, tax breaks, and new "cyber laws" to any multinational setting up shop. Malaysia intends to provide the best incubator on the planet for high-tech businesses and create an environment in which a native high-tech industry could take root and boost the country into the ranks of developed nations by 2020.

In Malaysia the ruling party has kept a control over the non-electronic media. Mainstream newspapers as well as television channels are owned or controlled by the governing coalition parties. Given this scenario new political forces released by the Internet have created dilemma for the political establishment. All disgruntled elements within the political spectrum have channeled and sent through the Internet. The proliferation of web sites critical of the government has increased. The Internet serves as an important alternative media in Malaysia and provides space for the pro-opposition views and news. To date the government has been unable to do anything to curb this tendency effectively. As Malaysians become more educated their desires to seek things out for themselves and this often leads them to clash with authority. Every new form of communication riles authority, and the Internet is no exception.

Oblivious the power and speed of Internet, Mahathir underestimated the growth of the opposition to his ousted Deputy Prime Minister Anwar Ibrahim and his reformation agenda which started in 1998. Prior to the emergence of Internet, Mahathir could overcome nearly every crisis by controlling the 'authentic' news and information reaching the public. He thought that given the government's control of the non-electronic media he anticipated that Anwar's refomation's struggle would die off soon - a tradition among the Malaysians who are known to have very short memories.

Such an anticipation would have come true if there had been no ICT in Malaysia.But, in 1998 personal computer and Internet was already being a 'craze' among Malaysians especially among the teenagers and middle class society in general. Even those Malaysians who had no PCs could access the news of the opposition through the government computerisation of the government departments and services. Here it was possible to gain access information sent by the reformation groups. In this way the reformation groups manage to rally their supporters and help keep the flow of information going. Mass gatherings were successful, thanks to IT and Internet.

Although the non-electronic main stream media was still under government control, the trust and respect of the Malaysian people had diminished towards them. When Malaysian began comparing the information of non-electronic main stream media with Internet many Malaysians for the first time felt they had been misled and began to lose their faith in the official media. A skeptical attitude towards main non-electronic main stream media began to develop their minds. Now, even though flaws and untruth elements do also exist in cyber based sites, many Malaysians regard them as more authentic and trustworthy than the non-electronic main stream media information.

Malaysiakini.com, Laman Reformasi, Freeanwar.com, Harakahdaily.com and *FreeMalaysia.com* are five out of the fifty over web sites which give alternative news coverage. They are visited by more than 250, 000 visitors daily. In addition to such web pages are 'e-groups' discussion platform. Another major advantage of the Internet is its interactivity – its ability to gather information about voters: their likes , dislikes and attitudes. In Malaysia opposition opinions sped across the Net; sites to offer the juiciest rumors or truths or facts on corrupt business deals and personal scandals involving the government. Because of the vacuum for a platform for intellectual discussion in Malaysia the Internet has become a haven for those Malaysia who longed to voice their long, long repressed opinions and ideas. *Sangkancil@malaysia.net* is one of the many electronic discussion groups which has earned a great reputation for intellectual discussion ranging from politics, religion, race, culture and nationalism.

The political tumult of the late 1980s which resulted from the constitutional crisis after sacking the Lord President Salleh Abbas was unable to garner much popular support for opposing views in spite of it triggering more opposition from within the governing parties than the unceremonious sacking of heir apparent Anwar Ibrahim. This was to some extent due to the lack of alternative channels of information dissemination a decade ago. The Internet has been credited with playing a pivotal role in sustaining the current reform movement. The world wide web has helped in facilitating dissent in Malaysia by providing a means by which information can be disseminated in a heavily-regulated media environment. The reform movement though at its nascent stage has been able to sustain itself and mobilize grassroots support due to alternative news and analysis available through the Internet. The sacking of Anwar Ibrahim unleashed a "revolution " which brought about a drastic change in the way Malaysians view politics and politicians, and a shift from the politics of personalities to political issues. The belief that the government was invincible is now gone. People dare to speak about an alternative government and toy with the idea of changing the government. Dr. Mahathir Mohamad is struggling very hard to recover his support.

The Internet provides views and call for many important issues such as the call for freedom of speech, assembly and the press, independence of the judiciary, abolishment of draconian laws, an effective police force and the abolishment of cronyism, nepotism and corruption. These pertinent issues are not allowed to be questioned or discussed in main stream media. Hence, when the public are enlightened to such alternative views via the Internet, Internet had turned savior. The Internet has broken this monopoly of control over free expression.

5.0 Conclusion

Access to the Internet will for a long time remains something available only to the elite groups in developing countries. However as shown above despite this ICT can have a profound impact on political development in particular in opening up new avenues for expression of popular dissent. Today IT is Malaysia which is experiencing the impact of IT revolution, but other regimes such as Singapore and China should bear in mind that they cannot avoid the inevitable impact of this revolutionary technology on their society. They have no other course other than to loosen their grip on their media and make room for dissent

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Addressing the Digital Divide

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Abstract:

The phrase 'digital divide' has been applied to the gap that exists in most countries between those with ready access to the tools of information and communication technologies, and the knowledge that they provide access to, and those without such access or skills. This may be because of socio-economic factors, geographical factors, educational, attitudinal and generational factors, or it may be through physical disabilities. A further gap between the developed and underdeveloped world in the uptake of technology is evident within the global community, and may be of even greater significance. The paper examines a number of these issues at the national level in the US, UK, Canada and New Zealand, looking for evidence of the 'digital divide', assessing factors that contribute to it, and evaluating strategies that can help reduce it. The relevance of these strategies to developing countries, strategies for reducing the international digital divide and the role of libraries in reducing the digital divide at national and global level are also explored.

Introduction

In the global digital information age those who are either unable to access the Internet and the World Wide Web through the application of Information and Communication Technologies (ICTs) are increasingly disadvantaged in their access to information. In most Western nations government policies are being established which attempt to ensure that all citizens have the opportunity to access and effectively use ICTs in order to enable them to participate fully in the educational, social and economic activities and democratic processes, which make use of these technologies. The 'digital divide' has become a convenient metaphor to describe the perceived disadvantage of those who either are unable or do not choose to make use of these technologies in their daily life.

There is an equally important digital divide that we should be addressing in this conference, and that is the gap between the state of ICTs, and levels of access and utilisation of the Internet in developed nations and the situation in less developed countries. Dramatic differences in access to the Internet are now becoming evident as usage in the West reaches 25% of the population in most Western countries and exceeds 50% in the most advanced Internet nations- the United States and Scandinavia. And this divide goes far beyond access to the Internet for scientists, scholars and students in universities and schools in developing nations, beyond the questions of access to the Internet for ordinary citizens, and must include access to the more valuable information sources, indexes, full-text databases, and e-journals, that are not included in the freely available information on the Internet, leaving scientists and researchers in developing countries excluded from knowledge that may be vital to agricultural, social and economic development.

As the term implies the 'digital divide' focuses on the higher end of ICTs involving the electronic transfer of information using digital formats which may themselves be replaced by new technologies within the next decade. It assumes that the benefits of these technologies and access to the world of information that is contained within them is a benefit that no citizen in the twenty-first century should be without, certainly not at least in the developed world. While I am not necessarily challenging that assumption, I believe that it is timely to remember two key points about the impact of technology on human civilisation:

- Technology does not in itself solve social and economic discrepancies within societies, and can often exacerbate them. Massive growth in the use of ICTs in India, for example has had no impact at all on what has been described as 'the highest concentration of poverty in the world".

- New technologies do not always replace the old. They may co-exist and in doing so enhance the range of human experience without necessarily diminishing the experience of those who do not use/utilise them, preferring older technologies to achieve the same ends.

For the majority of the world's population telephones are a technology beyond reach; food, sanitation and literacy are more urgent needs (UNESCO 1998). Bringing the Internet to an African village by the means suggested by some enthusiasts, using battery operated computers, and satellite access focuses on the wrong end of the technology spectrum, and not the end that is of most benefit to the world's poorest communities. The Internet is not in itself an education, does not teach literacy, and requires highly developed skills to access and interpret information found. A better solution for most of these communities still lies in the use of very basic technologies to promote traditional forms of education, enhance the delivery of healthcare, improve animal husbandry and crop management.

The contribution made by the Internet to the poorest nations of the world is likely to be, at least for the foreseeable future, in other ways. These include: the sharing of global knowledge and expertise to help support their initiatives against poverty and disease; the contribution of ICTs to the developed part of the economy in each developing nation which shows the same benefits from the application of ICTs as in developed nations; better communication with trading partners through e-commerce; ability to market tourism and trade opportunities through the World Wide Web; use of low wage economy and different time zones to monitor process transactions around the Globe. A recent address of the Secretary General of the United Nations to ECOSOC outlines many ways in which poorer nations can take advantage of ICTs for social and economic growth (United Nations. ECOSOC, 2000).

Who is excluded by the Digital Divide?

A number of research and policy papers addressing the issue of the Digital Divide identify specific groups of people as being especially disadvantaged in their uptake of ICTs. These include: people on low incomes, people with few educational qualifications or with low literacy levels, the unemployed, elderly people, people in isolated or rural areas, people with disabilities, sole parents, elderly people, women and girls. Because they are often already disadvantaged in terms of education, income and health status, and also because of their profound cultural differences from the dominant Western culture of the developed world, many indigenous peoples, and some migrant and ethnic minority groups are identified as having a very low uptake of ICTs. In the United States therefore Afro-Americans, Latinos, as well as North American Indian nations are identified as needing targeted programmes to increase their participation in the digital economy. In New Zealand, the indigenous Maori people have very specific cultural and educational needs that are the focus of government programmes aimed at 'closing the digital divide', but the large immigrant communities from the Pacific Island states also form a group of people largely excluded from the benefits of the digital revolution that the rest of the country is enjoying.

There is a developing debate as to whether this alienation from the Internet culture is primarily due to the factors listed above, or is primarily due to scocio- economic disadvantage. The influential Gartner Group report 'The Digital Divide and American Society' (Gartner, 2001) argues that there is a very strong correlation between socio-economic status and participation in the digital economy that suggests cause and effect. The report is based on data gathered in the United States in February 2000 shows that while only 35% of households in lower socio-economic groups have access to the Internet, 59% of those in lower middle income groups, 73% percent of those in upper middle income groups, and 83% of those in the top income groups have access to the Internet. These disparities are presumably exacerbated by an uneven distribution of the population in the various income groups.

Gartner argue that:

> While it is absolutely true that minority groups are at a distinct disadvantage when it comes to having Internet access, the reason for this is not that they are minorities but that they are at a socio-economic disadvantage due to lower education levels and poorer incomes. . . .
>
> Being on the wrong side of the Digital Divide is only one symptom of being poor. Lower socio-economic groups also have far lower household incomes, less access to educational opportunities, and have far more limited job opportunities . . . one of the keys to increasing the socio-economic status of this country's poorest citizens is to grant them fair and equal access to educational and economic opportunities, and the Internet presents us with an exceptional opportunity to do just that. (Gartner, 2001)

Despite these disparities in access the Gartner report found little difference in attitudes towards the importance of computing skills to a successful career and the importance of a home computer for children success in school among the various groups studied (which included blacks, rural communities, elderly people as well as the four socio-economic groups listed above). The report possibly erroneously assumes that this result indicates that all sections of the community pace an equal value on aces to the Internet, and that it is only lack of resources that prevents people from doing so. But this assertion is untested. Further research in a wider variety of minority groups into attitudes towards and barriers preventing use of the Internet is necessary before socio-economic reasons alone are assumed to be the major barrier to participation in the Information Age.

Barriers to Use of the Internet

Among the many known barriers that Gartner assume can be subsumed under socio-economic status are four key issues that need much more research, and which are not dependant on socio-economic status alone. Any attempt to address the digital divide must take these potential barriers into account if it is to succeed. These four key issues are:

- Physical access to ICTs
- ICT skills and support
- Attitudes
- Content

A recent UK government report 'Keystone for the Information Age' identifies these more succinctly as the three C's: Connectivity, Content, and Competencies, attributing attitudinal barriers to lack of relevant content and lack of ICT skills. The Library and Information Association of New Zealand Aotearoa (LIANZA) in its recently issued report Towards a National Information Strategy' that focuses on bringing a 'Knowledge Society' to New Zealand and encouraging participation in the Internet by all New Zealanders, uses these three concepts as a guiding principle to identify the initiatives that the government must take, and those that the library community can contribute to achieve this goal.

Physical access

The main barriers that are identified under physical access are lack of a robust *telecommunications infrastructure* with sufficient reliable band-width for Internet connections, and *cost*, the ability to purchase, rent or travel to utilise without financial hardship, the necessary equipment. Affordable routine access is essential for participation in this new information age. While access is not dependant on home ownership, but can be severely constrained in the workplace; there are also constraints on the type of activity that can be carried out in the public environment of a community access centre or cyber-café.

At present land-line telephone connectivity is essential to home Internet access. Telephone access is by no means universal. For example, although 1996 census data shows that 96% of New Zealanders lived in dwellings with a telephone, this is not uniform across all ethnic and income groups. Up to 75% of Maori in households with incomes of less than $15,000 in some depressed rural areas do not have access to a land-line phone at home, although some have access to a mobile telephone. (Maharey and Swain, 2000) Even affluent rural communities suffer from geographic isolation, low bandwidth, unreliable connections, and interference from agricultural equipment such as electric fences.

Rapidly developing mobile telephone technology is likely to improve Internet access to some rural communities but only those in areas which are already better served in terms of land-line services and band-with. More remote areas remain outside normal mobile telephone service, and development of mobile services in remote areas is regarded as prohibitively expensive. Satellite services, also promoted as a solution, solve only part of the problem since although they allow high bandwidth traffic inwards, they are unlikely to support a very high level of outwards connectivity. Other technical solutions on the horizon such as Internet access through cable TV is also likely to exclude those in the lowest socio-economic groups. They are already the least likely group to subscribe to cable TV systems. It must also be recognised that all these technical solutions carry costs which must either be borne by consumers, or by central government or local authorities and passed on through taxes. In countries where the telecommunications industry is privately owned, the industry is quite open about its reluctance to make a substantial investment in markets which represent a tiny percentage of the revenue stream. Technical problems are likely therefore to continue to inhibit access in rural communities for some time to come, while cost, of both the equipment and especially monthly charges remain an issue with lower socio-economic groups in both rural and urban areas. .

Physical access also includes provision of access for people with disabilities. The importance of making the Internet accessible to allow all people in the community full participation in communications systems, education, employment and other economic opportunities regardless of their physical capacity. (Maharey and Swain). Indeed it is often regarded as one of the strengths of the Internet that it opens up channels of communication and access to information for people who have previously been excluded from full participation in the economic and social life of the country. Demand for access to the Internet by people with disabilities is steadily increasing and now seen as a human rights issue. While physical disabilities inhibit keyboard use, visual impairment inhibits screen use and learning disabilities prevent large numbers of users from participating in the benefits of the Internet and its rich resources. Libraries and web developers alike, governments and the business community need educating in what are now called 'adaptive technologies' which include techniques for basic web document design that meet the 'disabled-enabled' criteria of Bobby—the web-based validation service maintained by the Centre for Applied Special Technology (CAST) (http://www.cast.org/bobby) now accepted as a world standard, and required by the United States, United Kingdom, and New Zealand and other governments for their own web sites.

Lack of ICT skills and support

Lack of ICT skills and support is another significant factor in preventing certain groups of users from using the Internet. People in the many of the disadvantaged groups listed above are often prevented from making use of ICTs because of low levels of computing and technology skills, and also, very importantly, literacy skills. Where people in business or professional occupations acquire skills as part of their employment, manual workers and the unemployed are less likely to be exposed to such opportunities. Young people who do not go onto to any form of tertiary education are equally disadvantaged. While some skills spread rapidly in communities in which they are seen to have some value (learning to drive, to repair cars, to master sporting skills, to use electronic banking facilities) computer skills may not be highly valued by these groups. The interaction of factors such as: cost, restricting access to equipment; low educational achievement; and cultural, age or gender based exclusion from literacy and computing skills counteracts against the dissemination of such skills in disadvantaged communities. Educational programmes intended to bring these skills to such groups must overcome a range of such barriers.

Attitudinal barriers

Closely aligned with lack of skill and support are cultural and behavioural attitudes towards the technology – e.g. that computers are for 'brainy' people, for males, for the young, are difficult to use or belong to a middle-class 'white' culture. Concern over the lack of security of personal information or that computers are 'unsafe' for families because of the amount of unsuitable material on the Internet. These last two were major reasons given in a recent New Zealand study of rural communities for not using the Internet (Botha, 2001, p22). Although in developed societies the disparities between Internet access by gender are not large (a recent AC Nielson survey in New Zealand cites 53% males and 47% females having access, comparable Nielsen figures for other countries are: Australia 55 % males) USA 50% ; Singapore 60% UK 61%) Disparities between male and female use of ICTs and therefore access to the Internet are much greater in developing countries. The involvement of women may be as low as 5% in some areas (United Nations. ECOSOC, 2000). This has serious implications for women's participation in a growing global economy, and also involves a significant wastage of talent which such countries can ill afford.

Attitudinal barriers can also be culturally based. In many cultures which place high value on oral culture, personal communication and strong family and kinship networks, the use of computers for communication purposes will not be a high priority. Such barriers may apply to the lowest socio-economic groups of developed nations, to strongly networked cultural minorities, indigenous groups emerging from an oral culture, and non-literate rural communities throughout the world.

Content

One significant reason why some groups choose not to access the Internet is because the content is not relevant or interesting to them. This may apply to specific groups in society, such as the elderly, or women, but more significantly again, to cultural or ethnic groups outside the predominantly Western culture of the Internet. In many societies digitisation of heritage collections is proceeding at a considerable pace and these often include rare and highly valued records of indigenous peoples-raising of course complex issues of ownership and access. But equally important is contemporary content that is relevant to these communities. The National Congress of American Indians lists Content and Sovereignty as key issues that along with Access, Economic investment and Education are essential to the development of the web as a resource for economic development, and for use in Native American Schools as a teaching/learning resource (NCAI, 2001). Specific interests of Maori communities in New Zealand centre on land, the language and genealogy, and several key reports recently have recommended government initiatives to help Maori communities develop content on these topics, to provide access to Maori land records, and to create more Maori content on the Internet including material in the Maori language (LIANZA, 2001; Information Policy Summit, 2001)

Diffusion of Innovations

A key issue in overcoming all these barriers is a better understanding of the way in which innovations are introduced to society. The advent of the Internet is one of the major innovations of the twentieth century, and yet little attention is paid in research on the Digital Divide to this concept. Rogers' theory of Diffusion of Innovations defines five characteristics of an innovation which have been shown to affect the rate of its adoption in a society. Other factors relate to the agency introducing it, and the process of its introduction. The five characteristics are: relative advantage, compatibility, complexity, trialability, and observability. (Rogers, 1995). Some of the research into the digital divide, in particular barriers to the adoption of the Internet by groups, can be interpreted in light of this well-tested and useful theory. The relative advantage of the innovation over previous means of obtaining information, education and communicating with friends and family must be demonstrated to potential users, and must outweigh any disadvantages inherent in the technology. Keeping in touch with family is definitely one of the drawcards for older people in New Zealand. Compatibility of the technology with other cultural norms is also important. For example, the use of a machine to communicate, dependence on reading/writing as the basis of communication is often not compatible with cultural norms that focus on oral culture. In addition information on the Internet inhabits an uncontrolled environment in which cultural sanctions cannot protect it. This has been a major issue for New Zealand Maori whose often sacred information and icons may be displayed on the Internet without their permission, just as it is for religious group whose icons and images are inappropriately used.

Uptake of innovations also depends on trialability and observability. Where in wealthier communities people can learn the technology at work, and assess it value to them in the domestic setting, unemployed, and manual workers may not have this opportunity. Lack of knowledge in the community affects the exposure of individuals to Internet based technologies, and their ability to observe and try-out the technology. Any solution to the problems of the digital divide must take these factors into account and build them into projects intended to reduce the digital divide in order to ensure success.

National connectivity and initiatives

What figures are available for national rates of access to the Internet(gleaned from a wide variety of sources) indicate a huge disparity between nations. Patterns of use can easily be seen to reflect cultures, the balance between rural and urban economies, and levels of literacy.

Statistics on world connectivity

Figures are derived from the Nua web site(http://www.nua.ie). Figures include all users, adults and children, who have accessed the Internet in the past three months, or where this figure is not available, in the past six months or earlier. The figures include all people who have accessed the Internet and is not specific to Internet account holders. Where only data on account holders is available this has been multiplied by a factor of three.

Asia/Oceania

Country	**date**	**number**	**%age of population**
Australia	Nov 200	8.42 mill	43.94
Bangladesh	July 2000	30,000	0.02
China	July 2000	16.9 mill	1.34
Fiji	July 2000	7500	0.90
Hong Kong	Nov 2000	3.46 mill	48.69
India	Mar 2000	4.5 mill	0.45
Indonesia	July 2000	400,000	0.18
Japan	Nov 2000	38.64	30.53
Laos	July 2000	2000	0.64
Macau	July 2000	40,000	8.98
Malaysia	July 2000	1.5mill	6.88
Nepal	July 2000	35,000	0.14
New Zealand	Nov 2000	1.49 mill	39.03
Pakistan	May 2000	1.2 mill	0.85
PNG	July 2000	2000	0.85
Philippines	July 2000	500,000	0.62
Samoa	July 2000	500	0.28
Singapore	Nov 2000	1.85 mill	44.58
Taiwan	July 2000	6.4 mill	28.84
Thailand	Mar 2000	1 mill	1.65
Vietnam	July 2000	100,000	0.13

Rest of the World

Country	**date**	**number**	**%age of population**
Canada	Dec 1999	13.28 mill	42.8
USA	Nov 2000	153.8 mill	55.83
Europe			
UK	Nov 2000	19.98 mill	33.58
Sweden	Nov 2000	mill	56.36
Norway	Oct 2000	2.36	52.6
Ireland	Nov 2000	1.04	27.5
France	Mar 2000	9 mill	15.26
Germany	Nov 2000	20.1 mill	24.28
Spain	Nov 2000	5.49	13.72
Middle East			
Israel	July 2000	1 mill	17.12
Jordan	Mar 2000	87,500	1.92
Lebanon	Mar 2000	227,000	6.39
Africa			
Burundi	Jul 2000	2000	0.03
Egypt	Mar 2000	440,000	0.65
Mauritius	Jul 2000	55,000 4.66	
South Africa	May 2000	1.8mill	4.19

With the Internet population in Asia growing at a rate estimated to be at least 45% Asia is expected account for approximately 25% of all Internet users in the world by 2003. With this rate of growth, it seems reasonable to assume that nations with what has been described as 'moderate levels of development' will have a chance to catch up with post-industrial societies in terms of education, access to information and to some extent economic development, where a new level playing field allows them to take advantage of e-commerce, and Internet tourism promotion. Developing societies look well poised to take advantage of the technology to enhance their participation in the global economy (Norris, 2000).

In the undeveloped world the situation is rather different. The United Nations Human Development Report for 1999 (UNDP, 1999) predicted that gains in productivity due to the new technology could widen the differences in economic growth between affluent and poorer nation as unable to invest in the infrastructure, and training needed to support the information society.

A high level United Nations sponsored meeting of government ministers and leaders in technology from developed and developing nations around the world met in New York in April 2000 to discuss the role of ICT programmes in development, to share experiences in both the wealthiest and poorest nations and to look for ways in which the poorer nations could extract early and tangible benefits from ICT, and globalisation rather than, as they put it 'watch globalisation extract benefits from them.' The panel called on all parties to unite to provide access to the Internet for the world's population presently without it by the end of 2004, and proposed as action points for reaching this goal that the UN should proclaim the universal right of access to ICTs such as the Internet as an important new component of the United Nations principles and conventions on human rights. The UN has so far declined to do so, but the Secretary General's statement subsequent to this report acknowledges the Internet as having a significant role to play in achieving human rights for all people.

The goal of universal access to the Internet was to be achieved by the establishment of an ICT Task force, an establishment fund of $500 million dollars to which the private sector and foundations would also be invited to contribute, and the writing off of one percent of debt for each developing country that would allocate the equivalent to ICT development. The UN was to arrange for international financing for ICT development for countries that met certain targets in their carbon-fixing activities.

Twelve national reports focus on the very real benefits, and the substantial growth in the sector that planned development of ICTs have brought to a number of countries in Europe, South America and Africa. One notable development is the Small Island Developing States Network which links 42 Island nations in the Caribbean, Indian, Atlantic and Pacific Oceans, giving them both vital links with the wider world from which they have traditionally been very isolated, the possibility of joint educational, health and business initiatives as well as some combined clout in their attempts to break some of the monopolistic telecommunications practices which keep connectivity charges prohibitively high (http://www.sidsnet.org). Such monopolistic practices have generally been outlawed in developed nations. The irony of globalisation is that the smaller and less developed the nation, the lower the average national income, the higher telecommunications charges seem to be.

Solutions

The global digital divide

There are no quick or easy solutions to the problem of the digital divide, either within nations or between nations. The disadvantaged in both rich and poor nations have too little cash to attract the attention of multi-national computer and telecom giants for long, and the big bucks are likely to be made in higher band-width and new technologies. However, in the plethora of UN, government and commercial reports concerning the digital divide there are a range of solutions proposed, and some of them specifically address the barriers to Internet use which we noted earlier: lack of physical access to ICTs; lack of ICT skills and support; negative attitudes; lack of relevant content.

In his report to ECOSOC the Secretary General of the UN focused on some key points that need to be addressed in order to assist developing nations increase their adoption of the Internet in their own communities and enhance their participation in the Global economy. Many of these involve international development initiatives and collaborative efforts between governments, donor organisations, and NGOs. He calls for a more effective transfer of knowledge from the rich Northern hemisphere to the South and notes the increasing number of scientific and research publications appearing on the World Wide Web, a development which brings more benefits to the developing South than to researchers in the North who would have other forms of access. The importance of information flows South–South, and South-North should also be recognised and fostered, so that expertise in successful planning and implementation of ICT development projects can be shared and resources are not wasted.

The Secretary General's report notes that lack of physical telecommunications infrastructure is not the key problem in many parts of the developing world where mobile technology is already well developed. Internet access for mobile telephone owners is predicted to reach nearly 1 billion people by 2003, although as we noted earlier this does not guarantee access in areas remote from normal transmission services. However, mobile technology is developing rapidly and these problems may well be resolved in the next few years. A more intractable issue is the fact that 98% of Internet Protocol bandwidth globally connects to and from North America. The US operates as the hub of Internet traffic and countries must make payments for traffic exchange and connectivity to US telecommunications carriers. Not only does this require foreign exchange payments in prohibitively high US dollars which developing countries can barely afford, it reverses the accounting system for telephone traffic where the cash flow is from the developed to the developing world. As more and more users transfer land telephone systems to the Internet, not only do developing nations lose cash income, they must pay increased charges for this connectivity. Careful renegotiation of existing global telecommunications agreements and a restructuring of the World Wide Web, a difficult task when the Web has no formal governance structure, will be needed to address these issues.

At the country level one of the most important issues raised in the UN report is the success that has been achieved in developing local community access centres, whether these are established in existing community centres, schools, meeting houses etc, or brought to the community in mobile units, not unlike mobile libraries. Indeed in some regions they could easily be combined with these. This involves a paradigm shift from the concept of individual connectivity to community connectivity, contrary to the thrust of the Gartner Report which insists on domestic access to ensure maximum advantage of the technology. However, it has to be recognised that for much of the world individual connectivity is an unachievable, and not necessarily a relevant goal, and that therefore models of community connectivity need to seriously explored. The Secretary General's report refers to an example cited in the report of the expert panel, of mobile Internet units in Cost Rica, known as LINCOS (Little Intelligent Communities) which are multipurpose multimedia mobile units housed in cargo containers and powered by a generator. LINCOS offer Internet access, e-mail, and training in ICT as well as banking facilities, telemedicine, soil testing and FM radio and TV in a small theatrette. Cargo containers have been used for telephone centres in Africa for some years, and container based Multipurpose Community Telecentres are being set up in several African states on a trial basis as part of an African Information Society Initiative (www.bellanet.org/partners/aisi/telepro2.htm). This is perhaps a solution for the poorest communities across Africa, which has the lowest levels of connectivity in the world, but only where existing literacy levels are adequate for advantage to be taken of the rich resource being offered.

While content development is not often seen as a primary factor in Internet uptake, inappropriate or inaccessible content continues to be a major deterrent. The use of English as the lingua franca of the Internet is far more inhibiting than English speakers realise. However, despite its dominance in cyberspace, English is in fact declining in terms of the number of speakers, as cultures using other languages grow more rapidly. The development of local content and more widespread use of automatic translation systems are necessary to address this issue. The example of China is often given, and the fact that only when the Internet in China was developed in Chinese characters did the 95% of the population who do not read English show any interest in connecting to the Internet. Usage multiplied immediately 10-fold and continues to do grow at the same rate The same rapid expansion was experienced in Russia after the introduction of Cyrillic letters to the Web interface. If we wish to accelerate the adoption of the Internet as a new technology innovation, relevant content in the vernacular, or language of each community is a key issue in persuading users of the relative advantage of the technology, and reducing the complexity involved in its use.

Solutions within developed nations

Addressing the problem within one of the most wired communities on the globe, the Clinton Administration proposed a 7 point scheme to eliminate the digital divide within America. It included:

- tax incentives to encourage private sector donation of computers, and sponsorship of community technology centres and training centres;
- funds to train all new teachers in the effective use of IT;
- funding for community technology centres in low-income rural and urban areas;
- public/private partnership to expand home access to the Internet for low income families;
- promotion of innovative use of technology for under-served communities
- subsidies to accelerate private sector extensions of broad-band networks in under-served communities;
- funding to help prepare Native Americans for careers in IT.

Not all of these initiatives are suitable for other communities, although they are carefully targeted at what are perceived as the key problems in the US. Among them are some key points—the solutions at least for developed nations attempting to reach the disadvantaged sectors of the community and assist indigenous peoples become involved in the ICT economy. They address two of the four basic issues affecting uptake of the new technologies, focusing primarily on physical access, i.e. supplying the hardware and enhancing networks and infrastructure; and ICT skills training in both schools and communities. Certain benefits may flow on from addressing these two fundamental tasks. Once the skills and access to the technology are in place perhaps it is easier to change attitudes and encourage the development of relevant content, created by the groups who find existing content irrelevant or unsympathetic. This has started to happen in North American Indian communities where tribes are building on their newly acquired skills to develop content for each Indian nation. The same development is taking place in New Zealand where a Maori Internet Society has been formed to promote Maori involvement in the Internet, and a large number of Maori tribes or iwi have their own sites. LIANZA is strongly promoting content as an issue to the New Zealand government in its National Information Strategy, not only because local content may attract more users from the groups not currently on-line, but because most content on the Internet is currently created in the United States and United Kingdom, and because it is essential that we continue to create our own local material for domestic use as well as to communicate with the world.

Solutions to the problem of broad-band access throughout the community is highly dependant on the telecommunications structure of each country. Deregulation of the industry is perceived to be the best solution, but competition will not necessarily bring higher band-widths to more remote areas. For example, in New Zealand the leading telco Telecom claims that it can deliver adequate band-width (14.4kbs or better) to 95% of the country and that it cannot afford to deliver the upgrade its networks to cater for remaining highly vocal 47,000 consumers. Its overseas shareholders demand a higher level of profit than this. Competition alone will not resolve this questions, legislation, pressure and some subsidy may be necessary and rural communities are already exploring building their own telecommunications networks to get around this problem. In an announcement ion 7 M may this year from the Cabinet Office, the British government signalled its intention to speed up the roll-out of broadband services to rural areas that individual suppliers did not see as commercial, by aggregating public sector procurement of broadband services, (that is combining demand from schools libraries hospitals etc.) and sharing with industry partners the commercial risk of rolling out broad band networks in rural areas. A similar New Zealand initiative using local and central government funds will carry out a needs analysis and prepare a business plan to demonstrate the opportunities for telecommunications investment in Otago/Southland by combining the needs of educational institutions, health services, and local business for broadband access (New Zealand Infotech, 14 May 2001).

A key feature of the Clinton plan is the allocation of $100 million to establish 1000 community technology centres. This initiative parallels the emphasis on community access centres noted by the UN report as having considerable success in isolated or otherwise disadvantaged communities. This model has been strongly promoted in Canada, as the Community Access Program (http://www.capic.gc.ca) and many other countries have observed and learned and decided to follow suit. CAP, administered by Industry Canada was designed to provide Canadians wherever they live with affordable public access to the Internet and the skills to use it. It is a combined effort of federal and provincial governments, schools, libraries, business, and community agencies. The programme which began in small rural communities in 1994 is now extended to larger urban communities and offers beginners courses in basic computing and Internet skills, including creating web pages, as well as advanced industrial skills and advice on how to identify and enrol in on-line education programmes.

Community access centres can also be based in schools, churches, job training centres, or community centres. In New Zealand some are based on marae- traditional Maori community centres focused on an elaborately carved meeting house which is used for formal meetings, and communal accommodation of visitors, the centre of Maori community life. (Botha, 2001) A different, but very successful community training model, SeniorNet, has also been developed in New Zealand. This is a loose network of local societies each of which is formed in its own community and incorporated as a non-profit-making society. Members receive initial training and then pass on skills to other members who pay minimal fees for training and access. Most SeniorNet members eventually acquire and rely on their own Internet access at home, and use the society for training purposes only.

The Botha report also looked at several other community access models analysing the potential of each to address the problems of rural communities in New Zealand. The models identified were: the social service model; the free market model; the extension model (based on existing community services in schools and libraries); the SeniorNet model; and the mobile model (Botha, 2001,pp25-26). Several examples of free market model community access programmes were identified in both urban and rural areas across North America and Europe, known either as telecentres or telecottages. These are usually based on the concept of a salaried manager, offering access and training within the community on a semi-commercial self-sustaining basis. Few of these have had the major success of the Canadian initiative, and are often not sustainable beyond the expiry of their initial subsidy. The success of the Canadian model is assumed to be due to visionary leadership a highly effective national coordinating committee aligned with strong community participation, and a successful strategy that combines financial and training incentives for communities and community leaders, and effective utilisation of technology to maximise resources and minimise bureaucracy. (Botha, 2001, p41)

The Botha report's analysis of the success and failure of a large number of initiatives around the world in sustaining such community access centres reaches the following conclusions:

- financially self-sustaining access centres seem to be unworkable in rural areas- the failure rate in most parts of the world is high;

- coordinating teams promoting such ventures nationally should ideally be independent of any one government agency but should act as a catalyst between government agencies, business and the community;

- community access centres need to be community driven, have high community participation, and focus on community needs rather than the technology;

- training in valued ICT and other skills that people value are essential for community involvement;

- clear incentives are required to foster the development of such centres, and cooperation between community groups and business and schools.

(Botha, 2001, p48)

Examining these well-researched conclusions it seems that we can deduce that unless usage of community access centres is sufficiently high and the products offered are worth consumers paying a commercial fee for, we are back in the situation that those with the most need can pay the least. Subsidies will continue to be necessary to bridge the digital divide, and relevance to community needs will drive uptake.

In all the factors listed above the well tested principles of Diffusion of Innovations Theory are evident, and can be shown to be the underlying principles lying behind the success or failure of the various initiatives. Critical success factors identified by Botha et al mirror the five factors of DoI. Assisting communities to develop their own access and training facilities, and using subsidies and incentives enables the relative advantage of promoting and acquiring ICT skills in the community to be explored and demonstrated within that community; getting communities to take the initiative within the parameters of a national scheme ensures the compatibility with community values and activities; the use of low-cost access to initial training and the use of volunteers and members of the community to carry out the programmes and assist each other reduces the apparent complexity of the innovation, and provides a non-threatening environment in which the application of ICT is both observable and trialable.

The role of libraries in closing the digital divide

Libraries, with their commitment to freedom of access to information, and promotion of life-long learning have an important role to play in closing the digital divide. They have been the force behind many initiatives to increase reading, literacy and access to information in the past, from the very foundation of public libraries as self-education resources for workers to the mobile libraries found in some form in all library cultures over the past century, to adult literacy and community education programmes. Libraries need, as many already do, to take an active part in the promotion of information literacy, including ICT and Internet skills, in their own communities, pressing for its inclusion in the school curriculum, and in teacher training. They also have a key role to play in promoting use of and knowledge of disabled-enabled web technology, and promoting adaptive disabled-enabled technology on their own web sites.

Public libraries in particular, and this includes national and provincial libraries in countries where these play a similar role in the provision of community services have a key role to play as a community access point. Many public libraries already play a significant role in the community, and have excellent knowledge of community needs. This can be harnessed and extended to ascertain the best ways of increasing access to ICTs within the community. It may means some action-based research to increase knowledge of needs and preferences. And the answers may require some changes. They may mean revisiting Internet access charges, allowing community groups to use the library during evening hours for community access programmes. seeking out community groups and social agencies with which to form strategic alliances, and persuading local councillors that investment in community access programmes to increase ICT and Internet use brings economic benefit to a community in a very cost effective manner.

A very effective model to promote such initiatives has been has been proposed in the United Kingdom with the People's Network concept which offers contestable funding for libraries ("our street-corner universities") developing initiatives for community access, especially staff training, content creation, and the development of Lifelong Learning Centres (http://www.peoplesnetwork.gov.uk). In rural communities, the regional library system can be a major promoter of community access programmes, offering premises and well researched and informed analysis of the critical success factors in such ventures, including those outlined above.

Libraries in the education sector have a key role to play in educating their patrons in the use of ICTs and information literacy skills. But we can go beyond that. Major research libraries joining consortia in order to purchase expensive database resources for their users can raise the question of including a key library in a developing nation in the relationship. Such partnerships may well be welcomed by the database owners and vendors as a more practical solution to the problem of which they are only too acutely aware, the inability of the most needy nations to purchase their services and the high quality information sometimes of crucial relevance to development projects that they deliver. This is the kind of enhanced North-South knowledge flow that the use of ICTs and the Internet can be used to promote.

There is aid money available in most developed countries but to date libraries have not seen themselves as having a role to play in the delivery of development aid to their less well-off colleagues. Only a few small initiatives between individual libraries, assisting with surplus resources, staff exchanges and training, or the placement of volunteers through agencies such as Volunteer Services Abroad, or aid projects sponsored by IFLA have taken place. Now that the role of information and uptake of ICTs in the economic development of all nations and communities has finally become one of the key issues on the world agenda, let's take advantage of the opportunity to put ourselves in the forefront of this very public and critical issue. There are two steps you can take right here and now. The first is to start thinking today about what initiatives you can take in your library to help close the digital divide in your own community. The second is to look for a partner at this conference from another country, or talk to a vendor, who could help you develop a programme, and a funding application if necessary, to share your resources, or join your consortium to help address the global digital divide in some small way. Libraries, and that mans all of us, must remain actively engaged in closing the digital divide.

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Introduction to the theme: University Libraries and Partnership

Niels Mark
Director
State and University Library
Århus, Denmark

The main theme for the conference is: Libraries and Librarians making a difference in the Knowledge Age.

We all believe in that, and we all understand that libraries have to adapt their services, their processes, their behaviour etc. to demands from their mother institutions and their users. But it also means that we can see the possibilities in the technological development and can find ways to use our resources in the best possible way.
Co-operation, partnership and research sharing are important elements to ensure this.

We have chosen to focus on partnership in our meeting to day. We will present you for some cases and examples, but what we hope is that together we can discuss in which areas and in which ways partnership is of interest for our libraries.

In the university libraries we have been working with partnerships for many years and in many ways. Typically within the interlending area with formal as well as informal agreements. Within the last years the traditional interlending agreement has been enlarged with consortia agreements where other activities besides interlending has been a part, e.g. common license agreement to electronic resources as electronic journals.

But there are several other examples of partnership and resource sharing where university libraries are involved.

Although partnership should be well known and accepted in the university libraries, my colleagues often maintain an attitude of reserve when I discuss this. Some are concerned about the identity of their libraries if they establish a close co-operation to another institution. Some are concerned about their independence and others can mention a lot of barriers as:
Organisational problems, Technological premises, Copyright restrictions, difference in culture and missions etc.

It is very easy to find barriers, and I am sure that members of your staff can mention a lot of barriers too, if you suggest a partnership agreement, which will effect them.

The truth is of course that in many partnership agreements there will be a lot of costs. A good partnership is an agreement where both parties achieve some advantages. The library will benefit, but will have to accept compromises too. It can be difficult to foresee all consequences, therefore when establishing partnership agreements confidence is the key word.

To day we will have 3 papers focusing on different areas, different types of partnership. But in our discussion I don't think we need to be limited to discuss the 3 cases, which will be presented to us. Let us also draw upon the experiences we have from other cases. Let us have a broad discussion of the theme. To illustrate the variety of the area, I will mention a few examples from my own library:

In Denmark we have several good examples of positive effects of partnership. 3 years ago the Danish Government put about 22 mill. Dollars into to a five-year project when developing Denmark's Electronic Research Library. A lot of results have been achieved so far within this framework, consortia license agreements, digitisation projects, development of subject - gateways etc. And in all projects one main condition has been partnership among several libraries with a co-financing from the libraries.

Another example from my own library is a digitisation project we have run with a publisher and a public library. As a partnership project we have produced a digital version of some yearbooks about cars and boats. We have made them accessible on the Internet, and the publisher has been able to produce and sell DC ROM versions.

We have been able to establish a partnership agreement about the use of different kinds of non-book materials, which allow us to produce and sell copies and ensure the copyright holders a fee from the sale.

We are involved in a joint venture with museums and archives in a national culture network, where the participating institutions present digitised materials within several areas.

Finally, our library is involved in a University Library Development Programme in Ghana in Africa. In this connection we have accepted to act as a support library for university libraries in Ghana, and a number of Danish research libraries have accepted the same responsibility. You can call it a one-way partnership, but our impression is that few resources from our side create great impact on the university service in Ghana.

We have been able to develop new services. We have saved money and we have established new competences as a result of our partnership arrangements.
We have learned that compromises are a part of it, and that we need to be open minded and not too individualistic to succeed in partnership.

I will stop my part, and we will now have 3 lectures with focus on special areas of partnership:

First:	Partnership among Library
Next:	Partnership between University and Library and
Finally:	Co-operation between Library and Suppliers.

But what about the users – are they partners too?
Shall we consider special partnership agreements with selected user-groups?
Well, I will leave this question to the discussion.

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Libraries in Partnership

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Summary

For nearly forty years, the Library of the University of Southampton, Great Britain, has been a major player in "Hatrics: the Southern Information Network". Hatrics is a library and information co-operative having more than 300 member organisations, which include public and academic libraries, health care libraries and the libraries of industrial and commercial enterprises of all sizes, from leading-edge government and industrial research centres to small enterprises with just a handful of employees. The fundamental objective of Hatrics is to improve the accessibility and availability of information among its members. The underlying philosophy is that information is a crucial resource for the commercial, social and cultural vitality of the region and that all organisations in the region will benefit if the commercial, social and cultural vitality of the region is enhanced.

At present, there are two major challenges facing Hatrics. The first arises from the internet. To what extent is a local/regional information network a realistic concept in the age of the World-Wide-Web? The second arises from the demands of a knowledge-based society, and the increasing recognition of the importance of lifelong learning in equipping people to cope with a society which is changing rapidly both in the workplace and in the social environment. What are the implications of this for libraries and does a local/regional libraries co-operative have any special value to add?

This paper will attempt to set university libraries into a wider commercial and social context and will argue that, while the internet is clearly important, local/regional library co-operation still has a useful part to play.

HATRICS was founded in 1962, following a meeting of local people, chaired by a professor of chemistry of the University of Southampton. The acronym originally stood for "Hampshire Technical Research Industrial and Commercial Service", but it has become a brand name in its own right and we now call ourselves "HATRICS: the Southern Information Network". I say "we", although I no longer have any formal association with HATRICS. I was Chair of the HATRICS Executive Committee from 1982 to 2000, but I retired from my post as University Librarian of the University of Southampton at the end of the year 2000 and thus ended 23 years' formal association with the organisation, though I still retain a strong interest in what it does and what it stands for.

HATRICS is a library co-operative, with a membership of over 300 organisations. HATRICS is:

- centred on Hampshire, the county at the centre of Britain's south coast
- prepared to accept into membership any organisation in a region sharing a border with its current geographical limits (that includes Caen in Normandy (France) which shares the English Channel with Hatrics as a common border)
- administered by the public library authority of Hampshire, but governed by an Executive Committee which is responsible to an Annual General Meeting of all members
- offering services through other public library service points.

Before I say more about HATRICS, I need to say something about the characteristics of the region in which HATRICS operates, because I believe that library services need to be rooted in the reality of their communities. In population terms it is best described as "dispersed high density". There are a lot of people, well over 2 million, depending on how you define the area, but there is no single large city. The two largest are Portsmouth and Southampton, each with less than 250,000 inhabitants. Both Southampton and Portsmouth have a university and Southampton has a second institution of higher education, Southampton Institute. Southampton University has an outstanding faculty of engineering. It founded a separate Department of Electronic Engineering as early as 1952 and invented the technology of fibre optics, a field in which it is still a world leader. (The erbium doped fibre amplifier, which is a key technology for low cost international fibre optic networks, is a recent Southampton University invention.) It has the second largest centre for marine science research in the world, after Woods Hole in the United States. In commercial and industrial terms, the following factors about the region are relevant:

- main industries are transport and defence
- Southampton has a large container port and an excellent and large deep sea harbour
- Portsmouth is a major Royal Navy base, now probably the most important in the country
- Aldershot, in Hampshire, is a major army base and Salisbury Plain, in neighbouring Wiltshire, is much used for military exercises and troop deployment, and has a number of army depots in its vicinity
- there are important centres for defence research at Farnborough (aeronautics) and Porton Down (chemical and biological warfare)
- there is a need for commercial diversification, as defence is de-emphasised following the end of the cold war.

Hatrics is a membership organisation. It is based on the understanding that everyone who joins contributes to the network as far as their resources make this possible, and takes from it as far as their need requires. But it is also expected that member organisations will not unreasonably exploit their membership status. Subscriptions are kept as low as possible, currently standing at a minimum of about US$150 per year. The subscriptions are on a sliding scale and are adjusted according to the use made by the network by each subscriber in the preceding year. Hatrics does not attempt to meet all the information needs of its members which they cannot meet from their own resources, except that, for the smaller ones, it mediates their relationship with the national interlending service through the good offices of the public library system. The strength of Hatrics lies in its record of identifying some of the most important information needs of the majority of its members, especially for standards and patents, but also for other scientific and technological information, and meeting them efficiently and effectively. Hatrics has recently been put under the spotlight by an independent consultant. His report, which reached the relevant department of our national government, characterised Hatrics as a model in British terms of how local library co-operation can work.

When I came to Southampton in 1977, Hatrics had already been in existence for fifteen years with Southampton University Library as a member. I was in favour of continuing membership, but I felt that this required a rationale so that I would be able to defend our commitment to Hatrics if challenged. I developed several strands of argument, of which I will mention just four:

- the library should function as a "loss leader" for the University. It should minimise the barriers to access to its collections so as to encourage local activities to use them. Familiarity with the university environment through the library might encourage local enterprises to use other university facilities such as its continuing education provision or its research consultancy services. This approach also rationalised the very real difficulty of establishing an equitable but tolerable tariff scheme for use of the library by non-members of the university
- although there are undoubtedly many pressures on the library, many of the books and periodicals can withstand considerably more use than they get. This is true in the sense that many books and periodicals are used relatively little, but it is accepted that the more books and periodicals are used, the shorter their lives are likely to be
- the library should encourage continuing education through library use, since it is to the advantage of our local community to ensure that its technically skilled professionals keep their skills up to date. Who wants to have their appendix taken out by a doctor who has learned nothing new for twenty years or more?
- the university benefits if the region in which it operates is economically and commercially dynamic. And the dynamism of the local economy is a self-feeding phenomenon - according to the evidence emerging from some of the powerhouse areas of the European economy such as Lombardy in Italy or North-Rhine-Westphalia in Germany. When local enterprises trade vigorously with one another, the local economy prospers more.

At its peak, Hatrics had a membership of about 450 organisations. But this number has declined in recent years and now stands somewhere between 300 and 350. This is still quite a large number; it makes Hatrics much bigger than any other local/regional library co-operative scheme in the UK. But it is only a tiny fraction of the number of enterprises in the region we serve. Even after you have discounted all those enterprises which have little need of information, fast food outlets for example, the community we are failing to reach is still much larger than the one we do reach. But better to do something than bewail the fact that we cannot do everything. The decline in membership is probably a result of the growth of the internet. The accessibility of information over the World-Wide-Web has almost certainly persuaded some people that skilled mediation of information, which is what library staff do, is becoming redundant. We in Hatrics do not agree with this, but we accept that it may be some little time before the downside of internet access to information emerges. By that, I mean the realisation that not all information on the web is equally authoritative and that the web is so poorly indexed that valuable information resources may remain hidden from the search engines most people use. These are downside effects which friendly, familiar library staff can help to remedy.

The fact remains that the internet has abolished the adverse impact of distance on the ease of access to information. Even if the web page is at the other side of the globe, it can be accessed just as quickly as if it were just round the corner. On the face of it, this undermines the concept of the local information co-operative. Within the last five years, we in Hatrics have confronted this issue. We did consider simply folding our tents and melting away, but not for very long. We decided that we must modernise the interface between the members and the organisation. Of course, we have created a web site and are now attaching to it some of the facilities which the co-operative has always supported. We are finding the website quite hard to fund, because of our deliberately minimalist approach to our subscription levy. We believe in the ideas which underlie Hatrics but we agree that their validity cannot be fairly tested in the new environment of the World-Wide-Web unless we ourselves join the world of the Web. We may have dressed Hatrics in the garb of any modern information centre, but we recognise that we are still under scrutiny in this new environment and there is no guarantee that we shall survive. There are three thoughts that principally sustain us, as we strive to make Hatrics a dynamic force in the new setting:

- we have a lot of achievements under our belt already. A major central core of members, Southampton University Library being among them, have travelled a long way in one another's company. There is no substitute for that shared experience. It is a basis for the confidence we continue to place in one another in these times of change
- we continue to believe in the model of the dynamic local economy in which enterprises stimulate one another, promote one another's success and ensure our region's continuing prosperity. This belief is one which our major sponsoring local authority, the county of Hampshire, also believes in very strongly.
- within the university library, the conviction still persists that we are an essential factor in the local information economy. We would impoverish everyone, including ourselves, in information terms, if we withdrew now.

There is also a wider dimension to this position. The rapid changes in society, and the onward march of scientific research and invention have already prompted a huge change in the attitude politicians take to education. When I went to university, forty years ago, it was assumed that my university career would be the last stage in my formal education and would equip me for a lifetime of fruitful work. Of course, there was a genuine appreciation of the need for on-the-job training and for occasional refresher courses, but it was assumed that this would be a very small factor in the pattern of my life. Now, by contrast, it is assumed that much of the knowledge, and many of the skills, acquired during the classical period for higher education, from 18 to 25 years of age, will become obsolete quite quickly, within ten years most likely, and that people's working lives will have to be regularly punctuated by additional formal education. Also, people will probably change careers several times in the course of their working lives. As a reflection of this, there is also an increasing call for policy and action to become more knowledge-based. Of course, this was always the case. But there was a time when the knowledge base on which our societies ran changed very slowly. Now it changes very quickly and all the time. So we cannot afford any longer to rely on the knowledge we imbibed, almost imperceptibly, through our membership of our society. We must all consciously be re-orientated, and re-orientate ourselves in recognition of this rapid process of change. Being a knowledge based society requires that we become a learning community.

In the UK, and quite likely in other societies as well, libraries are seen as potentially a very important force, a resource which can empower the learning community itself. It is partly because our libraries manage such large information resources. It is partly because we are ubiquitous; in addition to our public and academic libraries, many workplaces also have libraries or information services which could usefully take on this new role if they do not do so already. It is partly because we are viewed very positively, certainly in the UK, by the community at large. No other public service is so widely used as the public library service. It is partly because our positive image is seen as a way of counteracting the negative image which some people have gained of the education system, which did not encourage them or applaud their success, but seemed to prefer to brand them as failures. And these are the very people who stand most in need of the liberating experience further education can offer. At its best, it can transform them from being the victim of their circumstances to being the master or mistress of them. In this scenario, the university library is uniquely well placed. Not only is it serving an institution committed to higher and increasingly to continuing education. It also lies in a domain, the library domain, which is well regarded for its role in topping up people's educational capacity. But if it is to exploit its position to maximum advantage, it needs to operate in the broad scenario of all libraries, not just in the narrow setting of academic libraries.

Clearly, academic libraries exist primarily to serve the academic community which is their *raison d'être*, and, quite likely, their principal source of funds. But I am firmly convinced that the library role in mediating information is still important in the age of the World-Wide-Web. And I also believe that the library can be a major force in tempting people to continue their education, in providing important resources to enable them to do so, and in channeling them, in due course, towards those formal education experiences from which they can derive the most benefit. Through an organisation such as Hatrics, the academic library is enabled to play a fuller part in responding to the challenges of our time and in enriching the broader community to which we are ultimately accountable.

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Cooperative ventures between the university and the Library

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In the 21st century information and technology are major components of the environment. Information is generated at a faster pace than ever before and information has become a major component of economic development. Many industries and enterprises are based on information and information-related technologies. Many people proclaim themselves to be "information experts" and the Internet and the World Wide Web are often assumed to be the "library" of the 21st century. How do academic libraries and librarians fit into this information environment?

Librarians and information professionals have been addressing the many changes caused by the electronic information environment, and they are dealing successfully with this changing situation. Professional organizations, consortia, as well as schools of library and information science are reforming themselves to be successful in the new information environment. The Association of Research Libraries is developing assessment criteria for research libraries, scholarly, cooperative ventures for information sharing and provision, global ventures and other new information-related activities. The Association of College and Research Libraries has developed a number of new activities for their constituents including outcome measurements for information literacy in the higher education environment.

Academic librarians throughout the United States are rethinking their activities and repositioning themselves in their campus environment. The November 2000 issue of *College and Research Libraries News* features an article by Carla Stoffle and others, which discusses how academic libraries and librarianship should be reinvented.[1] Listed are seventeen challenges for academic libraries and these challenges can be met. The scholarly communication environment is described as well as the academic librarians' role within it. Ten axioms are provided to help academic librarians be successful in the new century. Above all, the article addresses the effect of the external information environment on libraries and librarians and provides some guidance on how to deal with that.

Another pertinent publication dealing with collaborations between faculty and librarians to teach students information skills is the *Collaborative Imperative: Librarians and Faculty Working Together in the Information Universe by* Dick Raspa and Dane Ward.[2]
The authors define collaborations, present literature reviews and several national models of faculty-librarian cooperative ventures.

The University of Louisville is Kentucky's Metropolitan Research University with ambitious goals for education and research, fully supported by the libraries.
The University of Louisville is a good example of a successful scenario where through a variety of partnerships the libraries have become more central in the campus teaching and learning community. Some of the initiatives described are small, some are large, some are less significant, some are more significant, but all of them have helped the libraries become more visible on campus and in the community, more involved in teaching, learning and research and ultimately, more effective in producing positive learning outcomes.

Faculty-Librarian Partnerships
Forming partnerships with faculty has been a goal for academic librarians for a long time. Librarians support teaching, learning and research by building collections, providing electronic information access, offering proactive library services and integrated information skills instruction. At the University of Louisville librarians, who are members of the faculty, have begun to form strong partnerships with a significant number of their teaching colleagues. The Library Liaison Program, in existence for several years, connects all librarians with relevant faculty departments for the purpose of collection development, library services and support, as well as information literacy instruction.

- **Information Literacy**

Information literacy is defined as "the ability to recognize when information is needed and to locate, evaluate and use needed information effectively".
At the University of Louisville librarians provide approximately 500 sessions of curriculum-integrated information literacy instruction a year to more than 8,000 undergraduate and graduate students, particularly in the health sciences, music, art, business, chemistry, education, engineering, social work, and English. They have created information literacy competencies for the different levels based on the Association of College and Research Libraries *Information Literacy Competencies Standards for Higher Education*, adopted in January 2001. http://www.ala.org/acrl/ilcomstan.html

They have incorporated active learning techniques in their information skills instruction. Working in close partnership with the teaching faculty librarians have integrated a required component of information literacy instruction in the honors program and in the undergraduate requirements.

- **Distance Education**

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[1] Stoffle, C. et al "Predicting the future. What does academic librarianship hold in store?" *CRL News* 61, No. 10 (November, 2000), 894-901.
[2] Raspa, D. and Ward, D. *The Collaborative Imperative*. Association of College and Research Libraries, Chicago, 2000.

The University Libraries support twenty distance education programs, particularly in business, education, engineering and social work offered by the University of Louisville in Kentucky and other parts of the country and the world. The courses utilize satellite television, interactive videoconferencing and the web as on-site teaching at off-campus locations. The majority of the programs are at the graduate level including a doctoral program in social work. The Distance Education Librarian works with faculty to prepare distance education courses, trains them in information literacy instruction and provides information and instructional support for the approximately 3000 students enrolled in these programs as far away as Athens, Cairo, Hong Kong, Singapore, Panama and San Salvador. www.louisville.edu/library/dlls

- **Faculty Development**

In 2000 the Delphi Center, a faculty development center for the purpose of helping faculty bring technology into their teaching and develop online courses and programs, was relocated into the main library at the University of Louisville and an additional branch will be located at the Health Sciences Library. Librarians are beginning to work with faculty as they restructure their courses and programs to teach in the electronic environment. The libraries have created an Office of Distance Learning Library Services (DLLS) within the Delphi Center to work more closely with faculty development for distance education.

- **Writing Center**

The Writing Center, part of the College of Arts and Sciences, was moved into the main library at the University in 2000. The library works with the Writing Center personnel to support the students using the Center to improve their writing skills related to term papers, essays, theses, proposals, resumes and others.

- **Metropolitan College**

The Metropolitan College is the result of a partnership between the University and UPS (United Parcel Service) to provide higher education opportunities for UPS employees. The libraries are participating through the Metro Computer Laboratory, a state-of-the-art computer facility for all students to learn computer skills, prepare their course work, and do research with the guidance from library-trained assistants.

- **Research (scholars' qualifications)**

Librarians partner with the Research Office to evaluate the University's scholars qualifications, grant support and research support for the University's more than seventy endowed chairs as well as all researchers supporting the many University institutes and research endeavors.

- **Assessment**

The Libraries are partnering with all academic units to assess educational outcomes. Working with an external company survey instruments have been developed and include relevant information regarding the libraries and information support. The libraries have also developed their own survey instruments for various campus groups. The first series of surveys has been collected and summarized. The results of these surveys have been most encouraging in terms of student satisfaction with library and information support as well as outcomes related to library and information skills.

Partnerships in the Health Sciences

The Health Sciences Library supports the health sciences campus units, Dentistry, Nursing and Medicine and has built strong partnerships over the years with various constituencies.

- **Initiatives with the Hospitals**

The library has worked with the three municipal hospitals to share resources and training. A strong partnership has been formed with the University Hospital to administer that library under contract. A partnership with another hospital has enabled their library to become part of the Libraries' Endeavor system. The three hospitals have an informal consortium for joint purchasing of health care databases and electronic journals.

- **IAIMS Grant for Informatics**

The library has worked with all constituents on the Health Sciences campus, Dentistry, Nursing, and Medicine to obtain a two-year Integrated Advanced Information Management System (IAIMS) grant from the National Library of Medicine.

The purpose of the grant is to plan for the integrated use of healthcare information for support of education, research, clinical care, community health and consumer health. All health care related organizations in the greater Louisville area are included in this joint effort.

Partnerships on Campus

Opportunities arise regularly to form more and new partnerships on campus and at the University of Louisville librarians have begun to take advantage of such opportunities.

- **Students**

The libraries work closely with student government groups, undergraduate and graduate students, to address their information needs and to ensure that they have appropriate physical and electronic access to libraries and library information.

Adding a first class coffee bar in the main library, lending laptops to students, extending library hours, doing a joint student library survey, and general student satisfaction and regular increases in library use are but a few of the outcomes from the students-librarians partnership.

- **Information Technology**

Keeping the library on the cutting edge of technology in terms of computers, software, networks, training and security is based on a strong partnership between personnel in Information Technology and the University Libraries Technology Office. The libraries' client server system, Endeavor, is jointly administered by the two units, not only for the University of Louisville but the western half of Kentucky, another partnership. The powerful campus network, administered by Information Technology, helps the libraries remain on the cutting edge of technology. A partnership with Xerox insures state-of-the-art copying and printing technology for all campus users.

- **Metroversity**

Metroversity is a consortium of all academic institutions, public and private, in the Louisville and Indiana areas to support higher education and workforce development. The universities and community colleges work together to ensure that the population receives opportunities for higher education without too much duplication.

The relevant academic libraries including some public libraries have formed a Library Council to address the information needs of students and the public in terms of education and work force development. Through resource sharing of information using interlibrary loan, special loan privileges and web sites the libraries are contributing to the area educational goals.

Partnership with Business

For more than fifteen years the Libraries have had a successful partnership with General Electric Appliance Park in Louisville to administer their library and information services through contractual arrangements.

Partnership with Other Libraries

Cooperative ventures among libraries have long been a strong component of library work in Kentucky. In recent years such ventures have included partnerships with public and school libraries. The University Libraries have worked with the Jefferson County Schools Media Centers and the Louisville Free Public Library (LFPL) on a variety of projects.

- **Professional education**

The shortage of librarians in the Louisville area is acute and the University Libraries have worked with the school media centers and the public libraries to bring two thirds of the library and information science program from the University of Kentucky to the University of Louisville. Librarians from the University and the public libraries teach most of these classes in the University Libraries. Some classes are taught through video conferencing. Thanks to this partnership the University Libraries were able to establish a minority librarian internship in reference where the individual works full time in the library while completing a master degree in library and information science.

- **Managerial training**

The Louisville Free Public Library has contracted with the University Libraries to provide a year-long management training program for beginning public library managers in cooperation with the University's School of Business.

- **Information literacy training**

The University Libraries are working with the librarians in the school and public libraries to help them develop their instructional expertise to teach information skills.

Statewide Library Partnership

The Kentucky Virtual Library was started in 1999 as a consortium of all libraries in Kentucky, private, public, state, academic, school, public and special. The purpose is support for distance education, support for the Kentucky Virtual University, information sharing, access to electronic databases, reference and web-based tutorials for learning information skills electronically. www.kyvl.org

Conclusion

Based on the University of Louisville' experience with partnerships involving academic libraries this seems to be a good direction in which to move at the beginning of the 21st century. Academic librarians need to be aggressive, able to take risks and work with their academic environment to be successful in this competitive information age. Academic libraries in the 21st century will continue to be major players in education and should become the center for teaching, learning and research on their campuses if they utilize their unique and specialized expertise, think out of the box, reach out to form new partnerships and achieve measurable educational outcomes.

A Few Examples of Other University- Libraries Partnerships

Academic library outreach through faculty partnerships and Web-based research aids.

Author: Ury, C., Meldrem, Jo. A., Johnson, C. V. **Source:** The Reference Librarian no67-68 (1999) p. 243-56

Academic/librarianship partnerships in the electronic library.
Author: Dugdale, Ch. **Source:** Program v. 33 no1 (Jan. 1999) p. 15-28

Courting athletics, creating partnerships.
Author: Gilbert, G.l R. **Source:** Library Administration & Management v. 14 no1 (Winter 2000) p. 35-8

Managing technology; innovation: who's in charge here?.
Author: Allen, N., Williams, J. F. **Source:** The Journal of Academic Librarianship v. 20 (July 1994) p. 167-8

A new academic library model: partnerships for learning and teaching.
Author: Rader, H. B. **Source:** College & Research Libraries News v. 62 no4 (Apr. 2001) p. 393-6

Technology partnerships: the PALNI success story.
Author: Frye, L., Lucas, V. Miller, L. R. **Source:** Indiana Libraries v. 18 suppl (1999) p. 39-43

University/industry partnerships: premonitions for academic libraries.
Author: McDonald, E. **Source:** The Journal of Academic Librarianship v. 11 (May '85) p. 82-7

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Experiencias de cooperación entre la universidad y la biblioteca

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En el siglo XXI la información y la tecnología son partes principales del entorno. Se genera información a un ritmo mayor que nunca; la información se ha convertido en un componente principal del desarrollo económico. Muchas industrias y empresas basan su actividad en la información y en las tecnologías relacionadas con ella. Muchas personas se autoproclaman "expertas en información"; y muy a menudo se asume que la WWW e Internet son la "biblioteca" del siglo XXI. ¿Cómo se enmarcan las bibliotecas universitarias y los bibliotecarios dentro de este entorno de la información?.

Los bibliotecarios y los profesionales de la información han tenido que plantearse continuamente una gran variedad de cambios causados por el entorno electrónico de la información, y están afrontando con éxito esta situación cambiante. Las propias organizaciones profesionales, consorcios y escuelas y facultades de biblioteconomía y ciencias de la información se están sometiendo a procesos de reforma para poder tener éxito en este nuevo entorno de la información. La Association of Research Libraries (ARL) está desarrollando criterios de evaluación para las bibliotecas de investigación, iniciativas de cooperación para compartir recursos y medios de provisión de información, proyectos globales y otras nuevas actividades relacionadas con la información. La Association of College and Research Libraries (ACRL) ha llevado a cabo una serie de nuevas actividades para sus miembros entre las que se incluyen medidas de resultados para la alfabetización en información dentro del entorno de la enseñanza superior.

Los bibliotecarios universitarios de los Estados Unidos están reorientando sus actividades y reconsiderando sus posiciones dentro del entorno universitario. El fascículo de Noviembre de 2000 de la revista *College and Research Libraries News* incluye un artículo de Carla Stoffle y otros, en el que se discute sobre la forma en que las bibliotecas universitarias y la propia biblioteconomía debería reinventarse[1]. Se enumeran diecisiete retos para las bibliotecas universitarias y estos retos pueden lograrse. Se describe el entorno de la comunicación científica y el papel de los bibliotecarios universitarios en ella. Se ofrecen diez axiomas para ayudar a los bibliotecarios universitarios a tener éxito en el nuevo siglo. Y, sobre todo, el artículo trata el efecto del entorno exterior de la información sobre las bibliotecas y los bibliotecarios, aportando algunas orientaciones sobre cómo interactuar con ese entorno.

Otra publicación pertinente que trata de la colaboración entre bibliotecarios y profesores para enseñar a los estudiantes las habilidades para la información es la obra de Dick Raspa y Dane Ward *Collaborative Imperative: Librarians and Faculty Working Together in the Information Universe*[2]. En ella sus autores definen la colaboración, repasan la literatura existente y presentan varios modelos nacionales de iniciativas de cooperación entre profesores y bibliotecarios.

La Universidad de Louisville es la Universidad Metropolitana de Investigación para Kentucky y tiene unas metas ambiciosas tanto para la enseñanza como para la investigación plenamente apoyadas por sus bibliotecas. La Universidad de Louisville puede constituir un buen ejemplo de un guión logrado en el que a través de una gran variedad de alianzas las bibliotecas se han hecho cada vez más importantes para la comunidad de docentes y estudiantes. Algunas de las iniciativas que vamos a describir son pequeñas, otras son extensas; unas serán más significativas, y otras menos, pero todas ellas han ayudado a las bibliotecas a hacerse más visibles en el campus y en la comunidad, más implicadas en el proceso de enseñanza, aprendizaje e investigación, y, en definitiva, a ser más eficaces en la producción de unos resultados de aprendizaje positivos.

Iniciativas de colaboración entre profesores y bibliotecarios

Establecer lazos de colaboración con el profesorado ha sido una meta de los bibliotecarios universitarios desde hace mucho tiempo. Los bibliotecarios sirven de apoyo a la enseñanza, a la investigación y al aprendizaje cuando forman colecciones, cuando ofrecen acceso a la información electrónica, o cuando dan servicios bibliotecarios proactivos y una formación integrada en habilidades para la información. En la Universidad de Louisville los bibliotecarios, que son miembros del personal académico, han comenzado a desarrollar muchas iniciativas de cooperación con un número muy significativo de colegas docentes. El Programa de Enlace de la biblioteca, que ya lleva en vigor varios años, pone en contacto a los bibliotecarios con los departamentos para los fines de desarrollo de la colección, de los servicios y apoyo de la biblioteca, o de instrucción en las habilidades para la información.

- **Alfabetización en información**

Se define la alfabetización en información como la “capacidad para reconocer cuándo se necesita una información y para localizar, evaluar y utilizar la información necesaria de forma eficaz”.
En la Universidad de Louisville los bibliotecarios ofrecen al año unas 500 sesiones de formación para la alfabetización en información, integradas en el plan de estudios, a más de 8,000 estudiantes de pregrado y de postgrado, sobre todo en el área de ciencias de la salud, música, arte, empresariales, química, educación, ingeniería, trabajo social e Inglés. Han elaborado listas de competencias en alfabetización en información para los diferentes niveles de acuerdo con las *Information literacy competencies standards for Higher Education* de la ACRL aprobadas en enero de 2001.

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[1] Stoffle, C. et al “Predicting the future. What does academic librarianship hold in store?” *CRL News* 61, 10 (Nov. 2000), 894-901.

[2] Raspa, D. And Ward, D. *The Collaborative Imperative*. Association of College and Research Libraries, Chicago, 2000.

Del mismo modo, han incorporado técnicas de aprendizaje activo en su manera de impartir formación en habilidades para la información. Trabajando en estrecha asociación con los profesores, los bibliotecarios han integrado un componente obligado de alfabetización en información en los planes de estudios.

- **Educación a distancia**

Las bibliotecas de la Universidad ofrece asistencia a veinte programas de educación a distancia, especialmente en empresariales, educación, ingeniería y trabajo social, ofrecidos por la Universidad de Louisville en Kentucky y en otras partes del país y del mundo. Para estos cursos se utiliza la televisión vía satélite, la videoconferencia interactiva y la red como si fuera enseñanza *in situ* en locales de fuera del campus. La mayor parte de estos programas son de postgrado, incluyendo un programa de doctorado en trabajo social. El bibliotecario encargado de la educación a distancia trabaja con los profesores para preparar las asignaturas, los forma en técnicas de formación en alfabetización en información y les suministra información y apoyo pedagógico para los aproximadamente 3,000 estudiantes de estos programas matriculados desde lugares tan alejados como Atenas, El Cairo, Hong Kong, Singapor, Panamá y San Salvador.

- **Desarrollo del profesorado**

En el año 2000 el Delphi Center, un centro para desarrollo del profesorado cuya finalidad es la de ayudar a los profesores a incorporar la tecnología en sus prácticas docentes y a diseñar y desarrollar programas y asignaturas en línea, fue reubicado en la biblioteca central de la Universidad de Louisville; una sucursal del centro se establecerá en la biblioteca de ciencias de la salud. Los bibliotecarios están comenzando a trabajar con los profesores a medida que éstos van reestructurando los programas de sus asignaturas para enseñar en un entorno electrónico. Las bibliotecas han creado una oficina de servicios bibliotecarios para la educación a distancia dentro del Delphi Center para trabajar más estrechamente en el desarrollo del profesorado para la educación a distancia.

- **Centro de apoyo a la redacción**

El Centro de apoyo a la redacción, que formaba parte del Colegio de Artes y Ciencias, se ha trasladado a la biblioteca principal de la Universidad en el año 2000. La biblioteca trabaja con el personal del Writing Center en apoyo de los estudiantes que usan el Centro para mejorar sus habilidades de redacción para trabajos de clase, ensayos, tesis, propuestas, resúmenes y demás.

- **Colegio Metropolitano**

El Colegio Metropolitano es el resultado de un convenio entre la Universidad y UPS (United Parcel Service) para ofrecer a sus empleados oportunidades de acceso a la educación superior. Las bibliotecas participan a través del Laboratorio de Ordenadores Metro, una infraestructura de ordenadores para que todos los estudiantes aprendan a manejar ordenadores, a preparar los trabajos para sus asignaturas y a iniciarse en la investigación bajo la tutela de asistentes entrenados por la biblioteca.

- **Investigación**

Los bibliotecarios cooperan con la Oficina de Investigación para evaluar las cualificaciones de los investigadores de la Universidad, el soporte económico y el apoyo a la investigación para las más de setenta cátedras dotadas, así como a los investigadores que llevan a cabo las tareas de investigación de los institutos de la Universidad.

- **Evaluación**

Las bibliotecas están colaborando con todas las unidades académicas para evaluar los resultados de formación. Con el apoyo técnico de una empresa externa, se han desarrollado instrumentos de análisis que incluyen información relevante sobre las bibliotecas y el apoyo de la información. Las bibliotecas también han desarrollado sus propios instrumentos de análisis para diferentes grupos. Ya se han aplicado las primeras series de encuestas y se han resumido sus resultados, que han sido muy estimulantes en cuanto a la satisfacción de los alumnos con la biblioteca y con el apoyo a la información, así como en cuanto a los resultados de formación que tienen que ver con la biblioteca y con las habilidades para la información.

Colaboración en el ámbito de las ciencias de la salud

La biblioteca de ciencias de la salud asiste a las unidades del campus de ciencias de la salud, odontología, enfermería y medicina, y ha establecido lazos de cooperación muy estrecha con diferentes grupos a lo largo de los años.

- **Iniciativas con los hospitales**

La biblioteca ha trabajado con los tres hospitales municipales para compartir recursos y formación. Se ha establecido una alianza muy estrecha con el Hospital Universitario para administrar su biblioteca bajo contrato. Un acuerdo con otro hospital ha permitido que su biblioteca se incorpore al sistema Endeavor de la biblioteca de la Universidad de Louisville. Los tres hospitales mantienen un consorcio informal para la compra conjunta de revistas electrónicas y bases de datos de ciencias de la salud.

- **Subvención IAIMS para informática**

La biblioteca ha trabajado con todos los miembros de su comunidad del campus de ciencias de la salud, odontología, enfermería y medicina, para obtener una subvención de dos años del Integrated Advanced Information Management System (IAIMS) de la Biblioteca Nacional de Medicina. La finalidad de esta subvención es planificar el uso integrado de la información sobre atención sanitaria en apoyo de la educación, la investigación, la atención hospitalaria, la salud comunitaria y la salud de los consumidores. Todas las organizaciones relacionadas con la atención de la salud en el área metropolitana de Louisville están incluidas en este esfuerzo conjunto.

Alianzas intrauniversitarias

Las oportunidades de formar nuevas alianzas dentro de la universidad surgen con regularidad, y los bibliotecarios de la Universidad de Louisville han comenzado a aprovecharlas.

- **Estudiantes**

Las bibliotecas trabajan estrechamente con los grupos estudiantiles y con los propios estudiantes de pregrado y postgrado para atender a sus necesidades de información y para asegurarse de que tienen un acceso físico y electrónico adecuado a las bibliotecas y a sus recursos de información.

Poner una cafetería de primera clase en la biblioteca central, prestar ordenadores portátiles a los estudiantes, ampliar el horario de las bibliotecas y servicios, hacer una encuesta conjunta sobre la biblioteca, el grado de satisfacción general de los estudiantes y el crecimiento regular del uso de la biblioteca son algunos de los resultados de esta alianza constante entre los estudiantes y los bibliotecarios.

- **Tecnologías de la información**

Lograr mantener a la biblioteca en la cresta de la ola de las tecnologías en computadores, programas, redes, formación y seguridad se basa en una fuerte cooperación entre el personal de Tecnologías de la Información y la Oficina de Tecnologías de la Información de la propia biblioteca. El sistema de gestión de las bibliotecas, Endeavor, es administrado conjuntamente por las dos unidades, no solo para la Universidad de Louisville sino también para la mitad occidental de Kentucky gracias a otro convenio. Una potente red universitaria administrada por la unidad de Tecnologías de la Información ayuda a las bibliotecas a mantenerse al día en asuntos tecnológicos. Y un convenio con Xerox asegura tecnologías punta de copia y de impresión para todos los usuarios.

- **Metroversity**

Metroversity es un consorcio de todas las instituciones universitarias, públicas y privadas, del área de Louisville y de Indiana para apoyar la educación superior y el desarrollo profesional de los trabajadores. Las universidades y los colegios comunitarios colaboran para asegurarse de que la población recibe oportunidades de formación superior sin demasiada duplicación de esfuerzos.

Las bibliotecas universitarias implicadas más algunas bibliotecas públicas han constituido un Consejo de Bibliotecas para tratar las necesidades de información de los estudiantes y del público en relación con la educación y el desarrollo profesional. Compartiendo los recursos de información por medio del préstamo interbibliotecario, de derechos especiales de préstamo y de páginas web las bibliotecas están contribuyendo a las metas educativas del área.

Alianzas con las empresas

Durante más de quince años las bibliotecas de la Universidad de Louisville han mantenido con éxito un convenio con el Parque de Aplicaciones de General Electric en Louisville para administrar su biblioteca y sus servicios de información por medio de acuerdos contractuales.

Alianzas con otras bibliotecas

Las iniciativas de cooperación entre bibliotecas han sido siempre un componente mayor del trabajo bibliotecario en Kentucky. En años recientes entre esas iniciativas se han incluido la cooperación con bibliotecas públicas y escolares. Las bibliotecas de la Universidad de Louisville han trabajado en varios proyectos con las mediatecas de las escuelas del condado de Jefferson y con la biblioteca pública de Louisville.

- **Formación profesional**

La escasez de bibliotecarios en el área de Louisville es aguda y la biblioteca de la Universidad de Louisville ha cooperado con las mediatecas escolares y con las bibliotecas públicas para impartir dos tercios del programa de biblioteconomía de la Universidad de Kentucky en la propia Universidad de Louisville. La mayoría de estas asignaturas las imparten bibliotecarios de la Universidad y de bibliotecas públicas en la propia biblioteca de la Universidad de Louisville. Algunas asignaturas y clases se imparten por videoconferencia. Gracias a esta colaboración la biblioteca de la Universidad de Louisville pudo establecer una beca de formación en referencia para un bibliotecario de minorías donde el beneficiario trabaja a tiempo completo en la biblioteca mientras completa un master en biblioteconomía.

- **Formación para la gestión**

La Louisville Free Public Library ha firmado un contrato con la Biblioteca de la Universidad de Louisville para ofrecer un programa anual de formación en gestión para gestores principiantes de bibliotecas públicas, en cooperación con al Escuela de Negocios de la Universidad.

- **Entrenamiento en alfabetización en información**

Las bibliotecas de la Universidad de Louisville están cooperando con los bibliotecarios de bibliotecas públicas y escolares para ayudarles a desarrollar sus capacidades pedagógicas a la hora de enseñar las habilidades para la información.

Alianzas con bibliotecas de todo el estado

En 1999 ha iniciado sus actividades la Biblioteca Virtual de Kentucky, un consorcio de todas las bibliotecas de Kentucky, privadas, públicas, estatales, universitarias, escolares y especiales. La finalidad es la de apoyar la educación a distancia, la Universidad Virtual de Kentucky, compartir la información, el acceso a las bases de datos electrónicas, servicios de referencia y tutoriales basados en la red para aprender las habilidades para la información de forma electrónica.

Conclusión

Basándonos en la experiencia de la Universidad de Louisville sobre todo tipo de alianzas en las que la biblioteca universitaria puede participar, ésta parece ser una dirección adecuada hacia la que moverse en estos comienzos del siglo XXI. Los bibliotecarios universitarios tienen que ser agresivos, capaces de arriesgarse y trabajar con el entorno académico para tener éxito en esta era de la información tan competitiva. Las bibliotecas universitarias seguirán siendo en el siglo XXI jugadores básicos en el terreno de la educación y deberían convertirse en el centro para la docencia, el aprendizaje y la investigación de sus respectivos campus si utilizan su experiencia única y especializada, piensan desde fuera del cajón y se abren para formar nuevas asociaciones y lograr resultados educativos mensurables.

Algunos ejemplos más de alianzas entre la biblioteca y la universidad

Academic library outreach through faculty partnerships and Web-based research aids. Autores: Ury, C., Melderm Jo. A., Johnson, C. V. Fuente: The Reference Librarian, n° 67-68 (1999), p. 243-256.

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A new academic library model: partnerships for learning and teaching. Autor: Arder, H. B. Fuente: College & Research Libraries News, v. 62, n° 4 (Apr. 2001), p. 393-396.

Technology partnerships: the PALNI success story. Autores: Frye, L., Lucas, V., Miller, L. R. Fuente: Indiana Libraries, v. 18, supp. 1 (1999), p. 39-43.

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(Traducción. al castellano: Cristóbal Pasadas-Ureña, Biblioteca, Facultad de Psicología, Universidad de Granada)

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Research on a national level and European co-operation: positive interaction

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Abstract:

Carried out within the framework of the Community policy as regards research and development, the European action of the Bibliothèque nationale de France privileges two directions: : the entry of Europe into the digital age and the strengthening of the potential of research and technological development. Being based on its spheres of expertise, BnF joins to other European partners to make share its tracks of research. On the other hand, for other projects which require a significant investment, research is launched from the start at the European level and profits then at the national level. The research led to these various levels has also strong interactions with international organisations and working groups. The concept of sharing acquired during these programs could be extended to other institutions in particular, to Archives and Museums.

Introduction

Many national libraries carry out research projects or would wish to carry out some. The question of the means acts often as a brake upon such initiatives. These projects generally relate to the Information Society, interest common to several institutions beyond even libraries. This is why a European co-operation has been set up, with backing from Community bodies for looking further into a research topic or for carring out programmes which would be too onerous at a single national level.

After a description of the research context in Europe, a series of practical examples taken from the Bibliothèque nationale de France (BnF) will illustrate how the national, European and even international levels overlap and interact.

1. The framework of research programmes

The European action of the BnF takes place with the support of the ***Conference of European national libraries*** (CENL) in the framework of the main Community policy action lines for the Information

Society. Within the CENL, the technical commission, COBRA+[1] (Computerized Bibliographic Record Actions), acts both as a platform for discussion and a launching pad for those European projects. Its main features are to facilitate access to and sharing of resources, by focussing on user needs and the use of communication networks. The two lines of research adopted by the BnF concern the entry of Europe into the digital age and the strengthening of European potential for research and technological development (RTD). This corresponds to the European Commission's ***Fifth RTD Framework Programme*** entitled "Creating a user-friendly information society".

Considering its mission, its spheres of expertise and the European policy which has just been described, the BnF has decided to participate in European research projects to tackle the following issues:

- defining and using metadata,
- developing access to catalogues,
- cataloguing and long-term preservation of electronic documents,
- interconnecting with other institutions
- and, focusing on multilingualism.

These projects involve more or less in-depth research. There are several types of interaction between European projects and those of the BnF. Research is either conducted within the national library and then leads to a European project or it is conducted on a European level with repercussions for the national library or on a national level. Nor should one forget the international level, which always underlies such projects.

2. Local research as an impetus for research on the European level

When the BnF decided to submit the AUTHOR[2] project to the European Commission it had already done a great deal of work in one of its spheres of expertise, ***authority control.*** It had in fact been conducted in-depth research for several years on the management of authority files in its departments. In addition, in the framework of the IFLA, it had also conducted a survey[3] of other bibliographic agencies or national libraries managing authority files. The BnF thus started the project with the intention of ***sharing*** its research and goals with respect to authority files, with other European partners, the aim being to stimulate debate and discussion of the sharing and re-use of authority data. The AUTHOR project, which is intended mainly for professional librarians, has investigated the possibility of having access to the authority files of national library partners so as to be able to share the results of work done on national levels and re-use authority data. This project which enabled to develop a prototype to test the feasibility of this re-use, was based on specific competences to each partner.

The MACS[4] project, while leaving a lot of the work to professionals, immediately focussed on end-users in order to provide them with multilingual subject access to the catalogues of the project's partner libraries. This enables users to simultaneously search with a single query in the language of their choice (English, French or German) for all relevant documents indexed by the project's partner libraries in their own language. For this project the research aspect was dealt with in the feasibility study[5] financed by the European Commission. Once again, this project was largely based on the experience of each national library partner and in particular on the German and French national networks which manage their own subject authority files.

These two projects show how a national research project may lead an institution to get involved in research on the European level.

3. Spin-offs of European co-operation for participating countries

The NEDLIB[6] project was based on one of the BnF's flagship missions, preservation with a new concern, **the *long-term preservation of electronic documents*.** At the time the proposal was submitted to the European Commission, national libraries were already aware of the problem of preserving off-line electronic documents and had anticipated the issue of having to preserve a huge amount of on-line documents, but they had done little research on that question. This is why the project's partners, both public (libraries, archives) and private (publishers and computer companies) immediately decided that the ***work should be carried out on a European level*** as the task was too great for each country to handle alone. The following items were thus achieved jointly:

- a functional model for the Deposit System for Electronic Publications (DSEP),
- a preservation metadata model,
- a study and experiment concerning long-term preservation strategies,
- the development of tools such as a 'harvester' capable of retrieving selected Internet sites, which could possibly be re-used by the partners,
- and finally, guidelines and in particular the one[7] describing the implementation and management of a system for preserving electronic documents.

NEDLIB had a strong impact, not only on the European level but also on the BnF and on national level. At the BnF working groups are studying the conditions for selective deposit of Web sites and will conduct an experiment on these lines. Co-operation with the Centre National d'Études Spatiales (CNES / the French Space Agency) has been extremely fruitful as CNES is very involved in the standardisation of long-term preservation of electronic documents. This co-operation with CNES has led to the setting up of a national work group called "Pérennisation des informations numériques" (Long-term preservation of electronic information)[8]. This group enables its participants, both public and private organisations, to share experience and to work together for international standardisation.

In 1997 the BnF decided to make ***descriptions of Internet scientific and cultural resources*** available to the public on its Web site. This application, called "Les Signets de la BnF" ('The BnF's bookmarks) was launched with great enthusiasm and led the BnF quite naturally to become, one of the partners of the RENARDUS[9] project. The main benefit of the project include :

- improved access to scientific and cultural resources in Europe, through aggregation and improved consistency of collections, multi-lingual support and a common understanding of academic user needs,
- and scale economies in the area of metadata creation, abstracting and indexing by service providers.

The project enables to work together on the European level to define the functionalities of the prototype gateway and the metadata model for describing the Web resources. This research has caused the BnF to redefine its bookmarks application to bring it into coherence with the decisions taken for the RENARDUS gateway. The search made within the framework of this project could also profit the French sites which describe Internet resources and involve a true co-operation at the national level.

4. European research and its openings on the international level

The European Commission's policy is to support national libraries' Research and Development projects (see the 4th RTD Framework Programme 'Telematics for libraries'). It has since enlarged the scope of this policy in the 5th RTD Framework Programme by strongly encouraging libraries to work with Archives and Museums. Furthermore networks can now be used ***to link research and cultural authorities internationally as well as nationally and on the European level***. Indeed, the reflexions led to the European level are confronted with the reflexions led to the international level and become richer by those. A large part of the NEDLIB project and the RENARDUS project, with respect to the metadata standard and common access to gateways leads their partners to participate in international discussions. NEDLIB now enables partners to take part in working groups, for instance the "OCLC/RLG Metadata preservation" group.

The partners of RENARDUS are now able to participate in discussions on metadata, in particular in the framework of Dublin Core. They are also able to announce the work done for mapping the Dewey Decimal Classification (DDC) to local classifications ; mapping which allows thus a common access to all partner gateways of the project.

Finally, the AUTHOR project which had a national origin, constantly had interactions at the international level mainly within the framework of the IFLA; for instance the study[10] conducted in 1993 about international co-operation in the field of authority data, the work done within the framework of the MLAR working group (Minimum Level for Authority Records)[11] and the FRANAR group (Functional Requirements and Numbering of Authority records) set up in 1999.

Conclusion

The European Commission research and development programmes gives a good opportunity for undertaking research on a European level thus allowing the interconnecting of Europe's national libraries. The European funding certainly allow the impetus, the accomplishment or the support of projects of which some could not be able to born without this help but beyond that, these research programmes familiarize the libraries with the concept of sharing : ***sharing of costs***, ***sharing of work***, ***sharing of efforts*** and also ***sharing of results***. For instance, the workshop UNIMARC[12] which took place in 1996, allowed the partners of the European projects concerned to announce their various experiment using the UNIMARC format. The TEL project[13], which was accepted by the European Commission as a supporting measure in 2001, aims to a simultaneous and direct access by the user to all the resources and gives thus a perfect illustration since it is going to concretize the ***common strategy*** of large research libraries : to make available larger and more various information resources to the users. However, it should not be underestimated the fact that the coordination and the follow-up of the co-operation also involve an additional workload which is variously taken into account by the institutions.

This European co-operation could of course be taken further to share our projects and our experiments not only with libraries but also with other institutions, in particular, Archives and Museums, which is what the European Commission would like to see happening.

Notes and References

[1] COBRA+ (Computerized Bibliographic Record Actions) aims to co-ordonnate cooperation actions, to promote new projects and support the sustainability and promotion of the results http://www.kb.nl/gabriel/cobra/

[2] AUTHOR (Towards a European network for name authority data), co-ordinated by BnF, aimed to investigate the feasibility for the transnational exchange of national name authority files for personal and corporate names. This project begun in March 1995 and finished at the end of 1997. www.bl.uk/information/author.pdf

[3] Management and Use of Name Authority Files. Personal Names, Corporate Bodies and Uniform Titles. Evaluation and Prospects by Marcelle Beaudiquez and Françoise Bourdon. - München : KG Saur, 1991. - (UBCIM Publications - News series, Vol. 5). (summaries in IFLA official languages included)

[4] MACS (Multilingual ACcess to Subjects) : The purpose of this project which follows the feasibility study carried out within the framework of the 4th RTD Framework Programme of the European Commission, is to develop a system for providing multilingual subject access for the end-user by mapping terms between existing subject heading languages (LCSH, RAMEAU and SWD/RSWK) Access to the prototype : http://infolab.kub.nl/prj/macs/

[5] CoBRA+ working group on multilingual subject access, Final report (1999) http://portico.bl.uk/gabriel/cobra/finrap3.html

[6] NEDLIB (For the installation, access and long term preservation of electronic documents) : This project aimed to develop basic tools for use by deposit libraries to ensure that electronic publications can be used now and in the future (1998-2000). http://www.kb.nl/coop/nedlib/

[7] The Nedlib Guidelines : Setting up a Deposit System for Electronic Publications / by Johan Steenbakkers. - Den Haag : Koninklijke Bibliotheek, 2000 - (NEDLIB Report series ; 5). - ISBN 90-62-59-1493 http://www.kb.nl/coop/nedlib/results/NEDLIBguidelines.pdf

[8] Groupe de travail national "Pérennisation des informations numériques" (Long-term preservation of electronic information) http://sads.cnes.fr:8010/pin/welcome.html

[9] RENARDUS (Academic Subject Gateway Service Europe) : The project's aim is to develop a pilot service offering improved subject-based routes to Internet-accessible collections of cultural and scientific resources across Europe. This project began in January 2000 and will finish in June 2002. www.renardus.org

[10] International Cooperation in the Field of Authority Data : An Analytical Study with Recommendations by Françoise Bourdon. - München : KG Saur, 1991. - (UBCIM Publications - News series, Vol. 11)

[11] MLAR Final Report http://www.ifla.org/VI/3/p1996-2/mlar.htm

[12] UNIMARC Workshop : proceedings of the workshop held in Luxembourg on 13 September 1996. - Luxembourg : European Commission, Directorate General XIII, 1996.

[13] TEL (The European Library) http://www.europeanlibrary.org/

For more information about the European programmes and the National Libraries in Europe

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CORDIS : Community Research and Development Information Service
http://www.kb.nl/gabriel/fr/welcome.html (en français), http://www.cordis.lu/en/home.html (in English)
GABRIEL : gateway to Europe's National Libraries http://www.kb.nl/gabriel/fr/welcome.html (en français), http://www.kb.nl/gabriel/ (in English)

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Research and international technical cooperation programmes

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Abstract:

This paper represents work in progress that considers the role of research in international development programmes undertaken to establish and develop Schools of Librarianship and Information Science, and some of possible reasons why many have failed to develop once the external support was terminated. It notes that the development of a research profile rarely featured in previous activities, and contrasts this with other disciplines in which the research capacity has made university departments critical to social and economic progress. It notes the real and imaginary obstacles to research and to international cooperation, and outlines the benefits to individuals and institutions of engaging in this type of international collaborative research. Finally, it urges a combined effort to take advantage of the current global interest in information transfer to persuade the funding agencies to support the Schools' efforts to develop and apply research expertise that substantiates the role of information and information services in economic and social development.

Introduction

During the second half of the last Century, there was a very considerable programme of international technical cooperation projects:

> "*to promote, establish, develop, maintain and evaluate ... librarianship and the library profession generally.*" (Parker)

Over the years, a significant contribution was made to the development of Schools of Librarianship and Information Sciences internationally by many Schools in Europe and North America. Typically this involved them in releasing staff to undertake reviews and advisory visits or short periods of teaching in order to establish or develop schools of librarianship. These activities were usually complemented by gifts of publications and equipment paid for by the sponsoring agency. Exchange visits by staff to discuss curricula and observe teaching methods also formed part of a typical development project, and sometimes scholarships were awarded to staff or prospective staff of the developing institution to enable them to take a higher qualification in the partner institution.

In recent years, there appears to have been a decline in international support for the development of education in librarianship and information sciences, notwithstanding short-lived programmes of support for the Schools in the former Soviet Union and its east European satellite states during the 1990's. Recent reductions in support have been based as much on a lack of political support for work in this area as on the reductions in the budgets of the development agencies, perhaps because of a perception that earlier efforts did not produce significant benefits in terms of economic and social development.

We are now entering an era of rapid technological change and proliferating information resources in which information literacy is increasingly widely recognised as important. Changes in information products and services have given rise to fundamental changes in the way information is used and its impact on every aspect of economic, educational and social activity. Effective use of information is recognised as a key success factor within an innovation-driven society.

Developing countries seeking the economic and social advances that are held in prospect by these changes are facing challenges not only in implementing the necessary improvements in their technical and regulatory infrastructures, but also in creating a society and workforce with the required knowledge, skills, and attitudes to make use of applications of ICTs and benefit from them. As a result, there appears to be the beginnings of a shift in the interests of the development agencies, which may benefit library and information science education and research.

Limitations on successful development

It is clear that in some countries the professional Schools remain weak and underdeveloped, with limited human and material resources, possibly teaching an out of date and irrelevant curriculum, failing to provide sufficient appropriately trained manpower to meet national needs, and held in low esteem. There is, moreover, some evidence that the funding agencies have become concerned that previous phases of international support for the expansion of universities were marred by under investment and poor standards.[1] How then should we make best use of the resources that might become available for professional development?

One conclusion that might be drawn from a simple analysis of the condition of library education in many institutions in developing countries would suggest that what is required is simply further assistance to enhance the physical resources and to guide the revision of the curriculum. There is no denying that this kind of assistance may be necessary. If, however, it is accepted that in some cases earlier efforts to assist those Schools to make progress have failed to prevent atrophy setting in subsequently, there must therefore be a search for a deeper understanding of the issues that stimulate continuous and ongoing development.

To draw attention to factors likely to underpin the development of library and information science schools and their curricula, the international agencies have published guidelines based on the opinions of people experienced in managing or developing schools.[2] There have also been reviews of the management of Schools of Librarianship in the developed[3] and developing[4] countries, and some analysis of the causes of recent closures of Schools in the U.S.A.[5], but there appear to have been no critical evaluation of what features of external collaboration have a successful impact on LIS education in the developing countries nor of the LIS Schools' broader impact on development. The author's current aim is to evaluate previous efforts to assist Schools in developing countries to become self-sustaining, and to consider different approaches to future international collaboration.

Could it be that part of the problem may be attributable to the failure of the donor agencies to provide appropriate support? How accurate were its perceptions of the needs and capabilities of the beneficiary institution? How well informed was the donor agency about the interests and capabilities of the individuals or institutions selected to provide assistance? A recent report on academic links has pointed out that, in some cases, the purpose of the external support and the means of achieving success may not have been clearly defined and understood in advance, and the human and material resource inputs may not have matched the real requirement. In other cases, it suggested that, because of a change in priorities or simply pressure on limited resources, external support had not been sustained for a sufficient period of time for it to be fully effective.[6]

Could part of the problem be attributable to the fact that, in effect, a consultancy service has been provided, and there are inherent limitations in the nature of consultancy activity and the *modus operandi* of consultants themselves? For example, a consultant is recruited to carry out a specific task, and disseminates the results according to the requirements of the contract, or personal inclination and the availability of time. Consultants' reports may add to factual knowledge and point to outstanding problems, but are sometimes not readily available, even to others working with a similar remit in the same institution.

Could it be that, when the reports are available, they are not sufficiently evaluative and self-critical? Whilst there are some merits in simply reporting facts that might not be widely known or whose dissemination has been in a language not widely understood, it is far more important that evidence of the problems that the consultant has faced and had to overcome to be successful are widely appreciated. These provide useful lessons for those who follow, or who are undertaking similar tasks elsewhere. However, few published reports give such insights into these critical issues, perhaps because these are also undoubtedly sensitive issues, but perhaps equally because of the failure of the funding agency to specify this as a requirement.

Or could it be that that the failure to develop many library and information sciences schools to their full potential must largely be attributed to a more fundamental limitation in the nature of consultancy? All too often it appears that the consultants have worked within the limitations of their experience, but have failed to develop the new skills or knowledge that the beneficiary institution and its staff really need. For example, there is equal concern about the relevance of the Anglo-American model of education for librarianship[7] in Africa and Latin America because they did not take into account differing cultural, social, and economic conditions[8], and in the last ten years there have been reports that curricular revisions have been put in train by Schools of Librarianship and Information Sciences in the region specifically to eliminate excessive Anglo-American influence.[9] The response of the development agencies has been to make greater use of South-to-South cooperation, but consultants from the developing countries appear to have worked within established paradigms.

The need for new approaches

There may be other significant factors to emerge from an analysis of experts' guidelines and comparisons with the actual patterns of development. However, most of the factors likely to be revealed are those that appeared relevant in the circumstances that applied in the latter half of the last Century. While the efforts to develop Schools that were successful during that period must be applauded, other approaches that do not appear to have been considered or attempted must also be identified and their likely utility must be evaluated. In particular, consideration must be given to what is most likely to be relevant and successful in the circumstances that will be encountered in the early years of the new Millennium. It must be acknowledged that in the last twenty-five years, something has clearly inhibited developments in our field. Whatever it is, it must be understood and incorporated it in future international technical cooperation programmes.

Changes in the circumstances of the development funding agencies and in the technological environment have led to suggestions that previous means of supporting staff and curriculum development might be supplanted by the introduction of ICTs. More than 10 years ago a feasibility study for UNESCO led to what was intended to be a 4-year pilot project utilising an electronic network to connect information science programmes in developing countries to support educational innovation through increased cooperation among developing countries.[10] However, UNESCO's SLISNET project[*] appears to have stalled, partly because of linguistic and cultural barriers[11], and partly because UNESCO lacked the funds and political will to sustain it, but perhaps also because most of the prospective participants had never met each other and therefore lacked confidence in using the system. Whilst there is some evidence to suggest that email can improve communications between institutions that have established links, we need a better understanding of the potential and limitations of these new media as an instrument in development.

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[*] The SLISNET website was viewed at URL - http://www.enssib.fr/autres-sites/SLISNET/index.html

A considerable effort has also been made through the 1990s to assist information services in the developing countries to make, and to be seen to be making, an effective contribution in national development. This is clearly important, but some questions should perhaps be asked about the approach to promoting an appreciation of the value and impact of information that has been taken to date. The British Council, for example, supported the HEIDI project (Higher Education Investment in the Development of Information), in which the author played a small part in its formulation. This was aimed at assessing the current thinking and determining strategic policy on investment in higher education libraries and information services worldwide[12], and appears to have been successful in influencing the policies of international agencies. The Information Sciences Division of the International Development Research Centre (IDRC) carried out a series of inconclusive case studies, attempting to develop methodologies for assessing the impact of information.[13] Most of these investigations were focused on the impact of improving library collections or services, or teaching professionals in other disciplines how to use information[14].

Whilst these efforts have served their purpose or at least kept attention on developing information services in education, government and industry, access to the increasingly abundant information will not in itself create a more informed society. Information literacy goes beyond the ability to identify and retrieve information from appropriate sources, and the ability to use ICTs, important though those skills are. More attention needs to be given to the complementary ability to use information effectively, and, particularly in the developing countries, to create sources of local information and to promote their use and an appreciation of their value

The HEIDI and IDRC projects appear to have overlooked one fairly obvious feature of developing countries. In most developed countries the academic departments of universities are one pool of expertise to which governments and the business community can turn to carry out investigations and provide informed advice. The universities not only deliver a nation's educational aspirations but also, by generating and disseminating knowledge, advance thinking and create understanding. The research that they undertake provides evidence about existing provision, reveals gaps, highlights issues, and stimulates new ideas that may become the basis of new policies and services. In developing countries, the universities represent the only pool of expertise readily available locally.[15] They are the national think tank. Neither governments nor businesses in such countries have the large payroll of highly qualified employees found in the industrialised countries. There is ample evidence of the involvement of other disciplines in providing research services and policy advice to governments in developing countries[16], but examples of Schools of Librarianship and Information Sciences undertaking such a role are relatively rare (or at least little publicised).

One of the features noticeably absent from most accounts of the development projects that have been carried out in Schools of Librarianship in the past is evidence of any research undertaken or even any discussion of the part that wide-ranging research undertaken by them might play in national development. It is, of course, fair comment that, in the first stages of a School's development, the capacity for undertaking research may not exist. There was also inevitable peer pressure to focus their initial research on local problems inhibiting library development.[17] Research into problems in professional practices and into future manpower needs was also actively encouraged by both the international professional associations and the intergovernmental agencies.

No one would deny that investigations of these problems are necessary, but it appears to be the case that, in many of the Schools of Librarianship and Information Sciences in the developing countries, there is limited research on other topics. Since 1996, for example, the National University of Mexico's Centre for Research in Librarianship (UNAM-CUIB), with partner Universities in 8 other Latin American countries, has been developing a database on research in Schools of Library and Information Sciences in the region. [†] Although this is admittedly limited in its coverage, it now includes a substantial list of projects, but most are focused on library education and practice and few on other issues fundamental to national development.

[†] The ICBIDIAC website was viewed at URL – http://cuib.unam.mx/icbidiac/index.html

Various obstacles have been suggested as responsible for the lack of library and information science research. In Africa, the reasons put forward for the limited research activity have included: lack of finance; lack of time to carry out research; and a lack of primary periodicals in which to publish research results.[18] It must be acknowledged that these obstacles are real.

In many of the developing countries, the institutional budget does not make much provision for supporting research. A recent report on the situation in Tanzania indicated that the government allocates only 1% of university budgets to support research, and almost any research must therefore be undertaken with external funds.[19] Moreover, there still appear to be academics in developing countries who see the opportunities for library and information science research as principally focusing inwards on library education and library practice.[20]

The limited budgets of libraries mean that access to periodicals and conference proceedings in developing countries is poor.[21] However, the International Network for the Availability of Scientific Publications (INASP) [‡] has recently been approached by partners in Africa, Asia, Latin America and the New Independent States to assist in supporting the production, access and dissemination of electronic information. As well as providing training in publishing skills, INASP has negotiated highly favourable, differentially priced subscriptions with major publishers and information providers for libraries in developing countries.

It is not only the domination of professional publishing by commercial companies in the industrialised countries and the use of the English language that act as barriers to bringing external knowledge to the developing countries. In the whole of Latin America, there are no more than about 60 indigenous journals in the field of LIS[22]; in the Arabic-speaking world there is probably no more than one such journal published in each country[23]; and few of them are widely available outside the country of origin.

Poor coverage of non-English language journals in the major indexing/abstracting services exacerbates this limited access to relevant bibliographic resources and to sharing information between the developing regions, although coverage of Latin American journals benefits from the efforts of the National University of Mexico's Centre for Library and Information Research.[24]

As a result, library educators are not free from the attitudes engendered by the depressingly poor levels of support for their university libraries, and in many cases have joined the:

> "*flight from harsh realities into the detachment of academic study*" [25]

researching and writing articles that flood the professional literature but contribute little to resolving problems.

Developing collaborative research

For potential researchers outside the Anglophone countries, there are additional problems. Even if the quality of their research and its results is sufficient to refute the charge made against their American colleagues that:

> "*Library educators seldom produce well-researched, literary products…This is where the library schools most fail the profession.*" [26]

Some researchers' limited or non-existent familiarity with English inhibits the dissemination of the research results in the major international scholarly journals in the field.

Even opportunities for publishing the results of research within their own countries are inhibited. Problems in the production, marketing and distribution of professional journals initiated in developing countries, particularly in Africa, make their existence fragile[27], although various international efforts are being made to overcome them. The African Journals Support and Development Centre[§] was set up in Kenya 1997 to undertake collective marketing and distribution of scholarly journals, as well as research and training activities, and African Journals Online[**] was established as a pilot project in 1998 by INASP with the initial aim of providing access to 50 journals.[28] Another example is SciELO - Scientific Electronic Library Online - an electronic virtual library covering a selected collection of Brazilian scientific journals.[††]

[‡] The INASP website was viewed at URL – http://www.inasp.org.uk/

[§] The AJSDC website was viewed at URL – http://www.oneworld.org/aas/

To overcome the problem of limited research activity, it has been suggested that appropriate professional organisations must take steps to enhance governmental awareness of library needs, but this seems to be a forlorn hope. The experience of at least some universities in developing countries is that, paradoxically, even academics who had studied abroad and were familiar with the potential of modern library services appear to have done little to encourage library development after their return home, possibly because the information available through the libraries in their countries was not so relevant in the region. So, it appears that the responsibility for taking the initiative must rest with the research community.

In the past, the initiative for collaboration has often been taken by LIS Schools in the developing countries or international agencies' officers, and the needs of the Schools have then often been seen as the short term updating of the curriculum and associated development of their human and material resources that was described earlier in this paper. Whilst this support may well be necessary, how can they also be persuaded to accept that engaging in collaborative research offers them some greater hope of becoming self-sustaining?

Given a focus on the issues concerning the development funding agencies, there appear to be opportunities for the Schools of Librarianship and Information Sciences in all the developing countries to enhance their status by researching the role of information and information services in support of relevant aspects of development. It is therefore encouraging that, despite the alleged obstacles to research and the limited opportunities for publicising the results, it is possible to find examples of progress made in some developing countries towards establishing a base of expertise in research into, for example, rural development [29], medical librarianship[30], education, communications, science and technology,[31] and agriculture.[32] How, then, can more research needs be identified that are likely to attract the attention of the government of the country concerned and the support of an external funding agency, and that meet the interests and are within the competence of the potential partners in a cooperative project?

Collaborating to support and expand the research base presents a number of different challenges for the Schools in the industrialised countries. Their national development agencies are more accustomed to supporting the development of libraries and information services. How then can relationships be developed with, and different perspectives be fostered amongst the agencies that fund international development to persuade them support the Schools in the developing countries as centres for research? Equally challenging is how to develop appropriate partnerships with Schools in the developing countries. How might efforts be made to retain and build on the links that are established with overseas students who attend Schools in the developing countries? Do the Schools in the industrialised countries do enough to encourage overseas students to focus their research interests on topics that are relevant to their countries' development needs, and develop appropriate research skills? Do the Schools in the developed countries do enough to instil in their overseas students the habit of publishing the results of their research, and assist them to develop the writing skills required to address the different audiences for research results – scholars, practitioners, and policy makers – and to prepare papers to a standard acceptable to appropriate journals?

There are other challenges that the Schools in the developed countries must face. How can they ensure the professional commitment of their staff? Staff will find an additional outlet for their existing research interests, the possibility of new sources of support, and perhaps some new methodological challenges and fresh insights. How can they ensure the support of their institution? Recently financial pressures on higher education in many of the industrialised countries, and the contractual constraints that the institutions are imposing on academics' time, have been creating an attitude within some Universities that may be inimical to any activity that appears to subsidise international development. However, the approach discussed here should mean that the employing institution would benefit from the facilitation of the legitimate research interests of its academic staff, and from the associated staff development.[33] In short, if they concentrate on their own areas of expertise, these issues should not be a problem for the Schools in the developed countries.

[**] The AJOL website was viewed at URL – http://.inasp.org.uk/ajol

[††] The SCiELO website was viewed at URL – http://www.scielo.br/

Mutual benefits

For those who are committed to research, whether in the developed or the developing countries, international collaboration in research offers a number of other benefits. It introduces them to new opportunities for research, and develops a wider range of professional contacts with similar research interests. It may require them to adopt new, inter-disciplinary approaches and develop the range of their competences. It also attracts additional funding that will not only attract kudos, but may provide some improvement in the resource base, particularly for the Schools in the developing countries.

There are also particular benefits for the Schools in the developing countries in international collaboration. Their staff may have access to the richer resources of the Schools in the developed countries. Research will not only develop their capacity to produce accurate and timely data, to undertake analysis, and to feed back into policymaking.[34] It raises their awareness of the potential demand for information services, of the availability of financial resources for them, and of political attitudes towards the role and development of library and information services. It also cannot fail to contribute to a School's clearer understanding of professional manpower requirements in the country, of revisions required in their curricular content, and of staff development needs in both the School itself and the nation's library and information services.

More effective dissemination of research and development findings, to policy makers, to managers, to staff delivery services, to NGOs and to the educational institutions is a major priority. This is in addition to publishing papers in refereed journals read by the few.[35] The publication of the research results in either institution's country not only raises awareness of the issues, but also raises the profile and national and international standing of both the collaborating institutions and the individual researchers.[36] It may also be seen as having a direct impact not only on improving library and information services, but also on the political influence of the LIS profession on society, ensuring that it is not left on the periphery of affairs.

The way forward?

There is a need for a new paradigm for international technical cooperation projects, in which inputs are directed more towards developing the research potential than they have been to date.

TECHNICAL COOPERATION INPUTS	RESEARCH POTENTIAL
• establishing partnership	⇒ reviewing political, managerial, and financial attitudes and circumstances; evaluating pedagogical and research capacity
• identifying needs and planning activities	⇒ market research: undertaking background studies; evaluating scope, objectives, funding, etc. for development related projects; drafting proposals for projects and requests for funding
• exchanging staff	⇒ evaluating relevant staff competences, development needs and required activities
• providing equipment, books, journals and other materials	⇒ creating comparable indigenous resources and studies of their use and sustainability
• undertaking joint programmes	⇒ undertaking research projects
• reporting activities	⇒ publishing and promoting research results; enhancing profile of partner institutions and funding agency

First we must recognise that while the activities of these agencies have declined, their influence has not diminished to the same extent. For example, the energy that the British Council mobilised in securing the interest of the World Bank in the role of library and information services was impressive. Its support for the

HEIDI project and its associated lobbying activities were a significant influence in the establishment of the World Bank's infoDev[‡‡] programme.

The policies of UNESCO's Communication and Information Sector should be and can be driven by the wishes of the member states. The policies of other development agencies are driven by the opinions put forward persuasively to politicians and senior government administrators, in both the developed and developing countries. The task of the LIS research community is to ensure that the potential contribution to economic and social development of research into information needs and use, and its role in moving forward the agendas of the development agencies, is fully appreciated and receives greater support.

In practical terms, this seems to offer a further role for IFLA in identifying the research expertise in areas relevant to development problems that exists in the Schools in both the developed and developing countries, and that might be brought together to address those problems. Another role might be in organising conferences and workshops on a regional or international level, to alert the development funding agencies and national governments to the potential role of the Schools of Librarianship and Information Sciences, to outline the research capacity that exists in them, and to develop their capabilities.

It is equally important that IFLA's member associations and institutions contribute to promoting these aims through their national UNESCO Commissions and appropriate government Ministries, and that IFLA engages fully in the global debate about the role of research into information in support development issues. National and regional groups of LIS educators also have a role to play in influencing national library associations, UNESCO National Commissions, and government agencies. But we also have to take initiatives as institutions or individuals to demonstrate what can be done to support relevant research, and to ensure that its impact on development is fully valued.

This paper is a revised version of 'International development of librarianship and information science education and the role of research', a contribution to a festschrift for Dr. Peter Vodosek, Rektor of Hochschule fur Bibliotheks- und Informationswesen (HBI), Stuttgart, published to mark the occasion of the merger of HBI with Hochschule fur Druck und Medien to create the new Hochschule fur Medien in 2001.

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Collaborative efforts in cross-country studies on information sharing infrastructure between China and the US

-- Introducing an International Cooperative Research Method

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Abstract:

Two studies conducted during 2000-2001 compared how information resources are shared collaboratively through electronic devices between libraries in the US and China. The two studies, presented at the ASIS 2000 Annual conference and 12th NIT International Conference, were the results of collaborative efforts between US and Chinese library researchers. A newly developed International Cooperative Research Method was employed in both the studies and was thought extremely useful in conducting such cross-country work. The research method comprises a combination of five tactical components: Expert Collaboration, Participant Survey, Purposive Comparison, Global Perspective and Remote Scene. Through presenting the results of these cross-country studies, this paper discusses the merits and issues of employing this new cooperative research method.

Background

A group of American Chinese and Chinese scholars in the US and China conducted two similar studies in 2000 and 2001 to investigate differences and similarities of how information resources are shared collaboratively through electronic devices between libraries in these two countries. The first study [1], which was the winner of the Digital Library and Information Science and Technology paper competition sponsored by the American Society for Information Science (ASIS) and was presented at the ASIS 2000 Annual conference in Chicago, USA, focused on the current practice of developing a national digital library infrastructure, the pattern and approaches used in organizing such projects, the framework and technologies employed in launching and managing the projects, and the national information countermeasures that have been used and could be used to further develop the digital library projects in China and the US. The study discovered that creation and development of electronic resource sharing consortia, especially at the national level, involve two major issues: information policy and use of technology. Issues pertaining to information policy included cooperation and collaboration between information service providers, collection development, intellectual property protection, management and administration on the digital library projects, and public information services (user clients). Issues pertaining to information technology included use of UNICODE, metadata, interface standards (Z39.50) and others. The issues found to be similar in both countries include:

- the relation of centralized and decentralized systems: while digital library technical aspects need standardized agreements to avoid duplication of effort, the digital libraries have to be distributed and not have only one center;
- digitalization is not simply scanning information and storing information; it should be a value-added process;
- user need and user group support were not critically studied: most digital libraries paid more attention to resource organization and description but user groups served by digital libraries were not given enough attention.

The second study [2] also explored these issues but focused on two different electronic resource consortia, the US Digital Asia Library (DAL) [3] and the Tsinghua Library's Electronic Resource Collection (TLERC) [4] program in China. The US DAL project was funded by the US Department of Education in 1999. It is a result of collaborative efforts of three universities' Asian libraries in Midwest USA. Tsinghua Resources Collection program is a specifically designed sharing device for collecting selected web resources. It is part of the Navigation Databases of Academic Main Subjects Project in Tsinghua Digital Library system, which initiated its services formally in 1995 and includes resources from within its own communities as well as those available online from libraries or information providers across the country.

This second study compared two individual digital library projects; both university-based cooperative projects sharing information resources throughout academic channels. The focus was on collaborative efforts deploying electronic resource sharing projects, the framework and technologies employed in launching and managing the projects, and the methodologies used in organizing, sharing and maintaining online resources with the electronic devices. The project aims to articulate new models for organizing and providing access to high-quality Asian Internet resources, based on sharing online resources through digital library channels to university communities. Example of similarities with these two consortia included operational structure, resource management infrastructure and the collaborative efforts to accomplish the electronic resources sharing tasks. Similar problems between the two consortia included multi-language display and browsing capabilities, and user need and user group support that were not critically studied.

There were a number of points of correspondence between these two nations' electronic information resource consortia which prompted this investigation. Yet a number of challenges and issues were also raised that made the investigations difficult and had to be resolved. Cross-country research, for example, requires similar terminology and languages among participating researchers to enable communication. A common understanding of different philosophical concepts and cultural and political backgrounds should be in place so that the researchers can share ideas. Distance problems may bring bias into qualitative research, may cause economic problems where cost effectiveness is concerned, and may have limits on timelines that cause insufficient interview time.

Development of an International Cooperative Research Method

The research path or method conducted in the above-mentioned studies and called an International Cooperative/Comparative Research Method is newly developed for the purpose of cross-country comparative studies in information and library science. The idea of the International Cooperative Research Method originated from this author's past research experience, and experiences contributed by researchers outside library science.

A comparison of the development of national information infrastructures and library directors' use of national library statistical data between the US and China [5, 6, 7 and 8], found that support and collaborative efforts from researchers in the countries was extremely important for the conduct of such studies. This International Cooperative Research Method is similar to Overseas Scientific Research [9], a method developed by the Japanese Government's Ministry of Education, Science and Culture, which was extensively discussed for the purpose of promoting international cooperative research and international scientific exchange in the fields of industrial technology. Its primary aim is to allow the intellectual exchange and cooperation of researchers having different concepts and experiences, which is the free exchange and cooperation among researchers across national boundaries, and is thought indispensable.

Description of the Method

Although the author has used this research method in the earlier studies, it has been further developed to include five tactical components. These five tactical components are: expert collaboration, participant survey, purposive comparison, global perspective and remote scene.

1. Expert Collaboration refers to the extent to which experts from different countries and institutions work together cooperatively on specific issues or topics for a predicated theme. This was the most important key element while the two comparative studies of the US and China's electronic resource sharing consortia.

The study comparing the US DAL and the Chinese TLERC, "Case Studies on Electronic Information Resources Sharing in The US and China," for example, was conducted in an extensive collaborative environment by two authors, one in the US in charge of the DAL, another in China familiar with his own university's digital library. The discussions, writings and final revisions for the article were mainly carried out by correspondence via Internet; some were in person.

The study "Digital Library Infrastructure" was conducted through the collaborative efforts of two Chinese American researchers, one an expert in library network technology, the other in specialized in national information policy. Both have strong experience in the studies of US and Chinese librarianship. This study also benefited from the contributions of a number of scholars in China. They included committee members of the national digital library program at the National Library of China and Ministry of Culture of China, and their contributions included introductions to the processes and designations of their projects, demonstrations of their digital library devices, participation in discussion of technology and policy issues, and their experiences in building their electronic information resource consortia.

2. *Participant Survey* refers to the way in which researchers in the team contribute resources. It is extremely important to what extent foreign partners can contribute research resources on the issues under investigation. In the two studies, extensive Web sites surveys via Internet analysis of the data in both Chinese and English language were employed. The programs' survey involved extensive email correspondence, and the discussions between the Chinese and Chinese American scholars were lead by experts who focused on each important segment, such as information policy, information technologies and information resources sharing issues. All participants expressed a strong willingness to listen and share experiences; and all expressed responsibility for their component of the designed tasks.

3. *Purposive Comparison* refers to the process through which an examination of different practice stands on recognition of its different cultural/economic/politic background. These practices are compared to see what in one context might benefit another context. This method allows researchers to compare effects from within a genre.

4. *Global Perspective* refers to the nature of the study that is globally orientated. Researchers' perspectives must not be limited to within their own country's cultural and/or political philosophies. The research should accept foreign researchers to participate in or to conduct joint research.

5. *Remote Scene* refers to the selection of unique expertise or resources from a remote location. If a cross-country study cannot be processed entirely from another side of the investigated country(ies), researchers could purposively use local expertise or resources contributed by local expertise to complete the study. The primary concerns of use of a remote scene is the cost of cross-country studies, which may need large-scale facilities and equipment that are too costly for one single nation to cope with and a remote scene can add what the researchers need without adding costs. Chinese scholars, for example, contributed a great deal to the research in the study "Digital Library Infrastructure," even though travel was not available for the study's authors.

Conclusions

The literature shows an inadequate exploration of research methodologies specifically dedicated to international comparative or cross-country studies in library and information science, although there are studies in library science conducted through cooperative efforts. It is this author's wish to further develop the method, International Cooperative Research Method, by sharing it with LIS scholars all over the world at the IFLA conference 2001:

1. The International Cooperative Research Method serves mainly cross-country studies. Its emphasis is on cooperative effort, although it certainly serves international comparative research, and might be called an international comparative research method.
2. Cooperative research and comparative research support each other. Cooperative research emphasizes collaborative efforts therefore needs to form special paths or strategies that allow contributors to work collaboratively for the same purposes. Comparative research analyzes and summarizes the facts and/or instances with a combination of research methods such as factor analysis, program evaluation and systems analysis, to output or outline similarities and differences of the compared objects.
3. Cooperative efforts require researchers in the group to participate equally. Counterparts should intend to overcome political, language, geographical, and technical obstacles to unite with their resource partners.

References:

[1] Yan Quan Liu and Jin Zhang. (2000). Digital Library Infrastructure - An Overview of Sharing Information Resources at the National Level. Winner of the Digital Library and Information Science and Technology paper competition sponsored by the American Society for Information Science (ASIS) and presented at the ASIS 2000 Annual conference in Chicago, USA, August 28-30, 2000.

[2] Yan Quan Liu and Xiaohui Zheng. (2001). Case studies on electronic information resources sharing in the US and China. Presented at The 12th International Conference on New Information Technology in Beijing, China, May 28-30, 2001.

[3] Digital Asia Library. http://www.library.wisc.edu:2784/projects/DAL/

[4] Tsinghua Library's Electronic Resources Collection program. http://infoweb.lib.tsinghua.edu.cn/default.htm/

[5] Liu, Yan Quan. (2001). The use of statistics in the managerial process by public library directors in China and the US -- a cross-country survey. Library Management, vol 22, Issue 4, (February).

[6] Liu, Yan Quan. (1997). National public library statistics and management: A comparison between the United States and People's Republic of China. Library Management, 18 (n4): 189-195. (Published on the Internet on May 5, 1997).

[7] Ma, Yan; Steven Miller and Yan-Quan Liu. (1997). Cataloging nonprint resources in the United States and China: A comparative study of organization and access for selected

electronic and audiovisual resources. International Cataloging and Bibliographic Control, 26 (2): 46-49.

[8] Liu, Yan Quan. (1996). The impact of national policy on developing information infrastructure, nationwide issues in P.R. China and the U.S.: Winner of LIBRI Best Student Paper Award 1996. Libri 4: 175-183.

[9] Overseas Scientific Research, see http://wwwwp.monbu.go.jp/eky1991/index-18.html.

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Geopatial data access: can we manage to shift?

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Our new earth

In his book *Snow Crash* Neal Stephenson portrays a virtual librarian. This is a digital construct, which looks and acts like a virtual human librarian, as this is easier to communicate with than an icon or any other concentrated digital display. The library he works with is a hyper library, i.e. all the data he has access to are interrelated, either by themselves or because of historical use. The librarian works with Hyper Cards and contains a self-educating algorithm, i.e. he has "the innate ability to learn from experience[1]". When asked who wrote him the librarian answers:

"*I was … coded … by a researcher at the Library of Congress who taught himself how to code. … He devoted himself to the common problem of sifting through vast amounts of irrelevant detail in order to find significant gems of information*".[2]

The most relevant source of information for us in this book is a piece of software called 'Earth', which "keeps track of every bit of spatial information that it owns – all the maps, weather data, architectural plans, and satellite surveillance stuff". When we take this one step further we may also add to these geospatial data all locational data, which is part of analogue and digital alphanumerical objects and databases, keeping in mind that a lot of spatial phenomena, including human activity, are constantly monitored[3].

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[1] This may result among other things in the filing of profiles which are constructed of previously posed queries and answers, i.e. FAQ's and FGA's, but the profiles may also include topological or contextual intelligence.

[2] Stephenson, Neal (1992). *Snow Crash*. – London : ROC, p. 101

[3] The amount of monitored data with a spatial attribute is overwhelming. To give but a few examples: satellites constantly spew data concerning the physical environment for e.g. weather-forecasts and the Global Change project and keep track of movements in the air and on the water; governments monitor traffic and other movements and keep track of planning and building; censuses are taken at intervals by most countries; biologists recount at intervals biological presence; companies keep large databases of customer-behavior; the world is almost spammed with web/video-cams; etc.

Thus one of the possible futures toward which we are trending or are unconsciously becoming part of is sketched.

What we have to assess is whether we are (going to be) able to work with access tools -whether existing, developing, or probabilistic- which make it possible to find the 'gems of information' our customers are looking for. In this assessment we have to keep in mind that we still mainly deal with Document-like Objects (DLO)[4], but that in the future we will more and more have to locate first the relevant data and then the software to create a legible file and/or image and possibly a tactile image. This transition from DLOs to databases[5] will take quite some time and depends partly on the availability of the latter in the public domain, i.e. in libraries, archives and the like accessible for private use. Should the data not be available in large quantities in the public domain than standards for its filing, retrieval and use will be market conforming and hopefully interoperable[6] and available to the public at large.

Towards a new paradigm

We are at the moment going through what might be called a paradigm shift. Kuhn used the term paradigm to denote a generally accepted set of assumptions and procedures that serve to define both subjects and methods of scientific inquiry[7]. When the assumptions and the procedures which serve them cannot answer anymore the aim for which they have been formulated or when the aim seems in need of reformulation as the answers are not adequate anymore, new assumptions and procedures have to be formulated which might answer the questions posed. Where Kuhn states that unanswerable questions lead to revolutionary science I would say that at any given moment in time a paradigm meets its paradoxical[8] frontiers. When the paradoxes accumulate there comes a moment when it seems logical to formulate a new paradigm, which inherently requires new practises[9]. The idea of paradigm shift cannot, however, be formulated too strictly. As knowledge and the data it is based upon are cumulative and assumptions and procedures follow each other consecutively there can be no sharp divide between one paradigm and another. It can sometimes be that some older assumptions are still valid and some procedures still workable within a new paradigm. Only with historic hindsight can one tell when one paradigm has been replaced totally by another. Furthermore a paradigm shift in itself might be an objective occurrence, but it can only be acknowledged as such when there is wide subjective cognizance of the new paradigm.

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[4] Though the term is much in use on Internet sites concerning the documentation of Internet sources it is hard to find a definition thereof. After reading through some 30 Internet sources I did not find an adequate definition. I would define a DLO as a unit of information that carries distinct descriptive data, which can be used in a formal description. The following quotes may lead to a better understanding of the nature of DLOs:
Document-like objects which share the characteristic that they can, but need not be, adequately represented in a print format, examples being pure text, textual images, text with printable illustrations, and photographs.
POCKLEY, Simon (1997). *Killing the duck to keep the quack.* <http://www.cinemedia.net/FOD/FOD0055.html> [Accessed: 11 January 2001]
Non-document-like objects, on the other hand, include such resources as virtual experiences, databases (including ones that generate document-like outputs), business graphics, CAD/CAM or geographic information generated from database values, and interactive applications which might have different content for each user. In the context of image discovery, these sources do not "contain" images as much as they "generate" images. The images they generate may be described as fixed document-like
objects, but the metadata required to describe them (the systems doing the generating) are distinct.
WEIBEL, Stuart, and Eric Miller (1996). *Image Description on the Internet.* A Summary of the CNI/OCLC Image Metadata Workshop, September 24 - 25, 1996, Dublin, Ohio. In: D-Lib Magazine, ISSN 1082-9873, January 1997. <http://www.dlib.org/dlib/january97/oclc/01weibel.html> [Accessed: 11 January 2001]

[5] Although R2V (raster-to-vector conversion) and satellite imaging of Land Use/Land cover classification are well established, the latter are mainly in the form of DLOs and not as databases. I would define a database as a collection or BLOB (Binary Large Object) of distinct data which are retrievable through an underlying structured principle, e.g. geographic co-ordinates, the periodic table of elements in chemistry, the genome sequence, etc.

[6] Interoperability (as defined by the FGDC): A condition that exists when the distinctions between information systems are not a barrier to accomplishing a task that spans multiple systems.
Nerbert, Douglas D. (2000). *Z39.50 application profile for geospatial metadata or "GEO"* <http://www.blueangeltech.com/Standards/GeoProfile/geo22.htm> [Accessed: 11 January 2001]

[7] Kuhn phrases it as the "universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners". Kuhn, T.S. (1962). *The structure of scientific revolutions.* Chicago, University of Chicago Press, p. X.

[8] Paradox: a person, thing or phenomenon at variance with normal ideas of what is probable, natural or possible. Hayward, Arthur L. and Sparkes, John J. (1982). *The concise English dictionary.*

The problem for us is that we are probably in the middle of a paradigm shift and therefore will have problems defining what assumptions and procedures might be adequate in the future and in what way we can make the transition as smooth as possible, as we cannot imagine future use except in a probabilistic way, presuming we can at least transfer contemporary procedures to future technologies. It feels like falling into a science-fiction story or a fairy tale, where part of the environment (physically and/or mentally) reminds us of our normal or traditional environment, but where there are also many phenomena and modes of thinking, living and communication which are hard to interpret, because we have to imagine them at the vague frontiers of our intellect and emotion. Sometimes we do not understand them because our frame of reference does not allow for them or because we are afraid to let go of our traditional frame of thinking and imagining. New modes of communication, or in our case defining new kinds of queries and answers, can be especially dumbfounding as we do not yet fully understand the underlying syntax and semantics, nor what they should signify. And most of us are not aware yet that while looking for the golden apples, guarded by the Hesperides, Atlas is going to put the burden of the world on our shoulders. And it might take a long time before we have outwitted him and return the burden.

Kuhn was chided for his paradigm theory, especially the idea of incommensurability of subsequent paradigms, as he could only give a historical review of the phenomenon. This might be a valid criticism were it not for the fact that during his lifetime no total paradigm shift was observable, as is probably also applicable to our own situation[10]. I think his theory applies to our situation as the basis on which our assumptions seem to work (the data), the processing of them (software agents), and the way in which we have to manage the production flow (TGIS[11]), as well as the aims for which these procedures are tools are changing in such radical ways, that the future situation seems incomparable or incompatible with the present or traditional one. Though the assumptions and procedures of the different paradigms are incommensurable they will exist side by side for some time as some of the data within the former paradigm, especially DLOs, cannot be transformed into the new paradigm, as the data from which they are constructed cannot be extracted in separate entities with their accompanying attributes from them and thus cannot function as independent data within the new paradigm. The digitized maps need to be emulated[12]. But also certain procedures ought to have low-level processing and retrieval agents, which are emulations of procedures of the former paradigm.

One of the properties of a paradigm shift is that experimental or innovative assumptions and instruments will diverge, i.e. the gap between separate (groups of) collections will widen for some time as, in the first instance, each will define anew its goals and the ways in which to try to achieve them. As with the old paradigm (Paris Principles and ISBD/MARC) it will take time to converge upon common goals and instruments. Some collections may have more trouble achieving these than others, depending on feelings of certainty about the goals to be achieved and resources demanded and being available.

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[9] Or as Lyotard phrased it: science comes more and more to the conclusion that her dynamism relies on the paradox, on incompatibility and indecisiveness. Peperstraten, Frans (2000). *Jean-François Lyotard*. In: Filosofen in deze tijd, p. 201.

[10] I think he should have applied his theory more to the totality of sciences or society as a whole than to a specific science. As a result paradigm shifts would take more time than 'revolutionary science' before new paradigms are accepted, as they have to permeate the sciences or society.

[11] Temporal GIS. "Although the computer technology for spatio-temporal analysis exists, the GIS community must undergo a paradigm shift to fully appreciate TGIS benefits. It's not just a matter of collecting time-based data within a GIS, but also developing a new way of thinking about time in a spatial sense". Jim Castagneri (1998). Temporal GIS explores new dimensions in time. http://www.geoplace.com/gw/1998/0998/998tmp.asp [Accessed: 20 February 2001]

[12] Rothenberg, Jeff (2000). *Using emulation to preserve digital documents*. The Hague, Koninklijke Bibliotheek, 69 p.

In order not to lose hope or get lost we have to assess the available contemporary technology and as there is no other way try to look for ways to emulate, migrate or transform them to newer configurations. At the same time we have to try, however, to innovate technologies or pirate them from other science-fields in order to be able to answer new kind of queries. Unfortunately I'm not practically involved sufficiently in how databases and the relations and topologies of their data are constructed and how these are developing, to totally understand and describe the change. The only thing I can do for the moment is try to imagine how they will develop without going into particulars. On the other hand I can summarize the traditional retrieval mechanisms we use and see how additional and/or enhanced functionality can be developed, and comment on the possible adaptability to our field of new retrieval mechanisms from other fields. When speaking of traditional retrieval mechanisms I think of Dublin Core (DC), ISBD/AACR-MARC (IAM), FGDC/ISO (FI)[13] standards and the like; when talking about innovative retrieval mechanisms I think of tools like visual geographic interfaces, TextTilling, and Knowledge Discovery and Data Mining.

From DLOs to data

The traditional paradigm we are working within is that of identifying DLOs. What we have to try to cope with is that in the future instead of images constructed of several layers of data printed on top of each other within a single image we will primarily work with single data or datasets. This is a change with more impact on our work than we may imagine. Up till now we have been well versed in reading cartographic representations and translating their contents to our customers who might not be so well versed. We do not have to be cartographers because the image is constructed for us and we mainly have to evaluate whether the sources used in constructing it are up to par for the query posed. We have learned to read the patterns and relations in the single and combined features of the map. We have learned to access the image through its particulars, using its formal descriptive elements and interpreting its cartographic and mathematical properties and subject matter. For interrelations we use geographic and subject thesauri. And when we have a sophisticated retrieval system we can select and combine single features and properties from the descriptions of the items and as an answer to our query we get one or more descriptions of maps that contain the information we are looking for. When necessary we can aid our customer in interpreting the documents he/she gets as a result of the query that was posed.

This method, however, does not always gives the desired answer, and usually will only be an approximation to the query posed, as no single item or set of cartographic items fully answer the question(s) posed. This is because we are depending on the selection and interpretation of data by the cartographer who constructed the map. And in the construction from basic to generalised data the cartographer not only uses one to one mechanisms, but also adds or distracts to/from the resulting images in such a way that the image becomes more friendly, artful or usable for the user[14].

The array of products which are produced, use but a fraction of the amount of data available, as physical production of maps is limited. Some data is probably never used as nobody imagines that it can be used for the construction of maps, or because it is economically not viable to use it, or because simply nobody knows that it exists or can be functional for certain purposes.

In his work *Laocoon*[15] the German dramatist and critic G.E. Lessing (1729-1781) "warns poets against empirical descriptions of landscapes, because the consecutive nature of language breaks up into parts what is bodily coexistent. These parts are then difficult or impossible to put together again. What exists side by side becomes transformed into before and after by verbal description. Painting has not this kind of limitation. Nor has the map, a geographer would add."[16]. However, the map is an interpretation of only a small part of the data available to construct it. As soon as it is created it gives the overview which hopefully is an approximation of the reality we seek, meaning we can far more easily interpret the interrelations between its constituent parts.

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[13] It might be that the FI-standards are mechanisms, which are exemplary for the paradigm shift, while they are innovative in coding nuclear entities and their attributes or properties, and qualifying them.

[14] The cartographer can even differ from reality when he puts the several layers of a map (e.g. topography, orography, text, etc.) together to make the image more legible or artful.

[15] Lessing, Gotthold Ephraim (1766). *Laokoon oder ueber die Grenzen der Mahlerey und Poesie.*

From evaluating to creating

But the future is probably inversely different. "With an array of analysis tools [researches in future] will work more exhaustively with the … digital resources than they have so far been able to work with analogue ones. … Increasingly, research efforts to interpret these data are assisted by data visualization tools. In addition to data mining and visualization tools, future researchers will be aided by intelligent agents that explore the … [data] looking for information that meets certain user-specified criteria and refine their searches as they accumulate data and knowledge. Digital archives [or repositories] combined with new technologies will liberalize scholarship. They will enable simultaneous access to a range of sources (both local and distant) and facilitate the use of research methods not possible with conventionally printed or hand written records."[17]
Though many of our colleagues understand the words in the premise Andrew Tatham laid down during the LIBER-conference in 1994[18], few of us can yet act it out in reality or understand its full impact.
In the data-age we, or software which acts in lieu of us[19], have to interrogate our customer as to what kind of features, topology, relations, patterns, etc. he/she wants to view in the image to be created. The easiest possibly is to select the area for which the image has to function together with its mathematical properties, like scale, projection, geographic grid[20], etc. Then we have to try to fill in that empty space with point-, line- and polygon-features with their attributes from one or more datasets available to us. And we must keep in mind that some might be stacked one on top of the other as datasets might come in many levels of functionality[21].
Now we have to try to think what the image we want to create might look like, then retrieve the data with which this image can be constructed, and then use the software that actually constructs this image. This means we have at least to be part-time cartographers to effectuate this process, and keep the critical words of Lessing echoing in our minds. The image to be created should be first formed in our mind's eyes before we select its constituent data to build it, in order that the cartographic overview we want to create is not marred by the fact that we fall into the trap of what is before and what is after without knowing what is the whole.

But it also means a radical change in accessing the data we have under our control. Descriptions like DC and IAM are inadequate as they are developed for identifying DLOs. Descriptions like FI are more adequate as they are developed in order to be able to evaluate the inherent quality of digital data or datasets. But they are first-generation standards, which can be used for evaluating and selecting single datasets. Are they also functional for knowledge discovery and data mining, i.e. finding the relevant data-elements or collections of data-elements from disparate datasets, which will be functional in the map-image our customers are requesting[22]?

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[16] Hägerstrand, Torsten (1995). *Landscape as overlapping neighbourhoods*. In Benko, Georges B., and Strohmayer, Ulf. *Geography, history and social sciences*. Dordrecht, Kluwer, p. 86.

[17] Ross, Seamus (2000). *Changing trains at Wigan: digital preservation and the future of scholarship*. London, National Preservation Office, pp. 11-12.

[18] *"We shall no longer provide the users with someone else's selection and presentation of data, but with the data itself and with the means by which the user can make their own selection and presentation of this data to inform or to mould their own or other people's image of the world*". TATHAM, Andrew (1995). *Can the map curator adapt*? In: The Liber quarterly, vol. 5/1995, no. 3, pp. 330-336. [http://www.kb.nl/infolev/liber/articles/2tatham.htm]

[19] It is questionable whether idiolect can be coded into software, in order to retain part of our subjective frame of reference, unless this software has the innate ability to learn from interaction with the customer. If so, for regular customers, their own query-profile might evolve, which includes part of their own idiolect.

[20] Most of this is 'spatial reference information'. E.g. Phillips, Hugh (2000). *'Colorized' Content Standards for Digital Geospatial Metadata, FGDC-STD-001-1998*. [http://badger.state.wi.us/agencies/wlib/sco/meta/colorstd/hier_basiccsdgm.html#Spatial_Reference_Information. Accessed: 2 January 2001]

[21] E.g. *TOP10vector*, the 1:10,000 digital topographic map of The Netherlands, consists of 69 layers of information, which might be retrieved per layer or in a combination of layers.

The new methods of processing depend for a large part on newly formulated queries and the belief or acceptance that such queries should be answerable with the data or datasets available. This means that new retrieval technology will develop experimentally and that many developments will turn out to be dead ends. To prevent too many dead ends we have to look at technologies used in those disciplines which work with vast amounts of data, like astronomy or remote sensing, census processing or the actuary field. In these disciplines testing tools try to make out patterns, relations and topology.
Geographic data growth is more than exponential. When we call a one-million map collection large by present day standards in Terabyte measures it might be called not overly large, and in future it might be even called small, also taking into account that a lot of the DLOs are topographical maps. The problem is that our tools with which we manage future data-collections must be more automated and partly independent as the human mind can but cope with a limited amount of data and produce from this a limited set of DLOs. In order to be able to manage vast quantities in the future we have to be prepared to become more and more meta-managers, of the data as well as of the metadata.

And we cannot stick to maps alone, though these are historically the background to our profession. We must be willing to widen our perspective to include pure geographic data, thus bringing geography and cartography back to their dichotomous nature[23]. But also we might sift auxiliary data from fields[24] which are not geographic in nature but which collect or use much locational data.

Within this frame of mind we have to look at the same time at combining or recombining disparate data of different value and functionality or even better, imagining the data and datasets as an amalgamated whole, in order to come to new insight or answers. However, we have to strive within our competence, while at the same time trying to imagine new, yet unknown, goals in our minds. Some of these processes might be autonomous as TGIS together with data mining can analyse data and their combinatorial values. One of the results might still be a cartographic map in order that the human mind can get an overview and process the data visualised within the image.

Assessment of traditional access-tools
When the documentation community became aware of the fact that electronic data or datasets needed a different approach of documentation then traditional analogue materials a vast amount of initiatives and evaluations took place in the 1990s. Since the early 1990s producer- and user-communities of elaborate digital datasets (DEM's, TIGER-files, remote-sensing images, etc.) started to develop sophisticated standards to document these.
In libraries bibliographic processes have been aimed at the user-tasks: 'find', 'identify', 'select', and 'obtain'. Other metadata-initiatives have added amongst others 'qualify' and 'manage' or 'housekeeping'.

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[22] N.B. data mining is data-driven, whereas by contrast, traditional statistical, reporting and query tools are user-driven. To be a true knowledge discovery method, a data mining tool should unearth information *automatically*, and extract these in such a way that they can be put to use in areas such as decision support, prediction, forecasting, and estimation. I will not investigate in this article the impact of this technology as this is still too far away from our everyday practices.
[23] And incidentally give more value to the "G" in the name of the Geography & Map Library Section.
[24] Like biochemistry, biology, botany, engineering, history, medicine, physics, psychiatry, zoology, etc. See: Millea, Nick (1998). *Delivering digital data into the library: the DIGIMAP project and its impact on the map room - the Bodleian Library experience*. In: The Liber quarterly, vol. 9/1998, no. 2, pp. 189-200, table 3 [http://www.kb.nl/infolev/liber/articles/millea03-11.html. Accessed: 2 January 2001];
Morris, Barbara et al. (2001). *EDINA Digimap: new developments in the Internet mapping and data service for the UK Higher Education community*. In: Liber quarterly, vol. 10/2000, no. 4, Table 1 and 2, pp. 446-448.

It is understood that information retrieval is measured in terms of recall and precision. If a lot of relevant information is missing, there is poor recall. If we get flooded by a lot of irrelevant information, there is poor precision. This pronouncement is adequate for discerning differences between the relevant metadata systems, which will be described below.
To foster understanding I have created a diagram in which the metadata-systems have been divided into 4 groups. Added is a 5th group which contains innovative tools, which will be treated separately.

[Diagram of access- and retrieval systems]

Band I[25]

These are simple records, created mainly by robot search engines by general search-and-auto-describe missions. As they do not discriminate between the functions of the words they harvest the resulting indexes show a lack of precision for those seeking qualified information. Unaware web surfers who start out to explore the available information in a random way mainly use them.

Band II

On the instigation of OCLC and NCSA workshops have been held since 1995 to try to find a modus in which these metadata can be formulated. The first workshop held in Dublin, Ohio (U.S.A.) found consensus on a set of elements called since then the **Dublin Core** (DC).
Dublin Core records are specifically created for resource discovery and as such description requirements are generally less precise than for traditional bibliographic records. This, in order that also non-professional documentalists can generate them. Soon the user community (among others the library field) found, however, that more precision could be needed to be better able to query DC-databases. Precision is sought in qualifiers, which can be added to metadata-tags. And when possible using controlled systems[26]. A problem to be solved is that most controlled systems or vocabularies (like Dewey Decimal Classification 21, Universal Decimal Classification, Library of Congress Subject Headings, etc.) are not freely available on the Internet, in which case those users who have disposal of these can only use their quality. Use of these controlled systems would enhance interoperability with other metadata-systems, like those in Bands III and IV.

Libraries use DC-metadata in an explorative way but also should embed them in the electronic resources they create themselves and make available through the Internet. Too much metadata is created in a post-coordinate process. To create more uniformity of DC-records some organisations provide more or less sophisticated templates[27] to enhance the value of the metadata.

As the Dublin Core is maturing a little the user-community is discussing whether the 15 Dublin Core elements might be more coherently expressed if they are related to an underlying logical model, which treats information resources as having logical states (an abstract work or a physical item, for example) that have relationships to each other and to other resources[28]. The inherent simplicity of DC-cataloguing poses quite some problems to map librarians, mainly due to the fact that there is no consensus yet as to what is 'best practice' and 'minimal adequate' DC-cataloguing. Though the syntax of DC is developing quite well there is a lack of semantics, as there is no rulebook like the ISBD.

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[25] For a more extensive treatment and developments within Bands I-IV see: Smits, Jan (2001). *Metadata and standards, confusion or convergence?* In: ???

[26] E.g. <DC:coverage CONTENT="(SCHEME=INTERNATIONAL PRIME MERIDIAN, GMT)"> W123°20´- W121°09´/ N49°38´- N48°55´</DC:coverage>

[27] E.g. Koch, Traugott and Borell, Mattias (1998). *Dublin Core Metadata Template* <http://www.lub.lu.se/cgi-bin/nmdc.pl> [Accessed: 25 January 2001], part of the 'Nordic metadata project'. These and other tools can be found on the website 'Metadata Related Tools'. DCMI <http://purl.org/dc/tools/index.htm> [Accessed: 25 January 2001].

[28] Weibel, Stuart (1999). The State of the Dublin Core Metadata Initiative April 1999. *D-Lib Magazine*, Volume 5 Number 4. CNRI < http://www.dlib.org/dlib/april99/04weibel.html> [Accessed: 25 January 2001]

Band III

In 1961 the IFLA adopted the Paris Principles[29] as basis for an international approach to "headings" and "entry words". They were however solely meant for catalogues of printed books. In 1967 the Anglo-American cataloguing rules (AACR) were published, followed by an interpretation manual for mapcurators in 1982[30]. The convergence of cataloguing codes started in 1971 when the IFLA published the first of the ISBD's for monographs and serials soon to be followed in 1977 by the ISBD(CM) for cartographic materials. Almost all ISBD's were revised in the 1980s and 90s (ISBD(CM) in 1987) and the last to appear in 1997 was the ISBD(ER) for electronic resources. This latter created havoc, because it means that most ISBD's have to be revised again to align them with the new insights concerning the description of electronic materials.
But there is more to it. As a result of changes in the expression of documents and their transport media IFLA started to evaluate the whole configuration of Paris Principles and ISBD's[31]. This study evaluated the value of the fields and elements, using a user-oriented conceptual model, where the elements are described as entities, which have attributes (the attributes serve as the means by which users formulate queries and interpret responses when seeking information about a particular entity) and relations to other entities. When they are related to user-services their function is still restricted to find, identify, select and obtain.

The ISBD(CM) under revision, of which a third draft was circulated in May 2000[32], tries to amalgamate alterations to the ISBD(CM) and those parts of ISBD(ER) which seem appropriate. The draft is largely adapted to the recent issue of CCQ[33]. For the moment there is a choice to extend area 3 (the material specific area) with:

- Statement of accuracy [for scale] (optional)
- Designation and structure of electronic resource
  - Structure of resource (optional)
  - Number of files, records, bytes (optional)
- Digital graphic representation method (optional)
  - Object type (optional)
  - File format (optional)
  - Object count (optional)
- Geospatial reference data (optional)
- Designation of electronic resource (when applicable)
- Characteristics (i.e. structure) of electronic resource (optional)
- Digital graphic representation data (optional)

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[29] IFLA Committee on Cataloguing (1971). *Statement of principles, adopted at the International Conference on Cataloguing Principles, Paris, October, 1961*. Annotated edition with commentary and examples by Eva Verona. IFLA.

[30] Stibbe, Hugo P. (1982). *Cartographic materials : a manual of interpretation for AACR2*. ALA.

[31] IFLA Study Group on the Functional Requirements for Bibliographic Records (1998). *Functional requirements for Bibliographic Records* (UBCIM publications - new series, Vol. 19). IFLA.
Also available through <http://www.ifla.org/VII/s13/frbr/frbr.pdf> [Accessed: 25 January 2001]

[32] Bäärnhielm, Göran (ed.) (2000). *ISBD(CM): international standard bibliographic description for cartographic materials*. Revision including Electronic Resources. Third draft. (Not published).

[33] Andrews, Paige G. and Larsgaard, Mary Lynette (1999). *Cataloging & Classification Quarterly*, Vol. 27. Haworth. Also published as: *Maps and related cartographic materials: cataloging, classification, and bibliographic control*. New York, Howarth, 487 p.

Further there are large changes/additions in/to the 'edition statement', and 'notes on system requirements'. Though the latter seem to be mandatory in all ISBD's I wonder if they will not serve better under the 'manage' part of metadata. Especially after a certain time when most electronic resources need to be converted, emulated, migrated or otherwise changed these data serve mostly internal library functions and not user-needs.

AACR and the ISBD are cataloguing codes, but before the user can search the bibliographic databases and read the descriptions they have to be electronically processed. For this purpose MARC (MAchine Readable Catalogue)-formats are developed. MARC is an implementation of the international standard *Information and documentation - Format for information exchange* (ISO 2709-1996)[34].

To alleviate problems with existing MARCs the Library of Congress in consultation with various user communities develops MARC21. This format "is an integrated format defined for the identification and description of different forms of bibliographic material. MARC21 specifications are defined for books, serials, computer files, maps, music, visual materials, and mixed material. With the full integration of the previously discrete bibliographic formats, consistent definition and usage are maintained for different forms of material"[35]. The format attempts compatibility with e.g. UKMARC and UNIMARC. After consultation with the UK library and information community the BL Executive Committee has decided to adopt the MARC21 format to replace UKMARC in time. One of the reasons for this decision was that "MARC21 represents a more effective route to the eventual adoption in the future of non-MARC metadata standards ..."[36].

With the upsurge of Internet applications the Library of Congress started in 1995 the project 'MARC DTD'[37] to enable the conversion of MARC-data to an SGML-environment and vice versa. With this DTD MARC-data can be converted to the Internet, but also organisations can create MARC-like metadata in the Internet and convert it to MARC-databases.

Band IV

Digital spatial databases have been created from the late 1970's onwards and reach nowadays the phase where there is countrywide coverage (on municipal, provincial and state level) and through GIS they can be integrated with other databases. Initially they were a continuation of existing analogue processes, but for the fact that they are more in vector-format and are built up of layers of information, which can be manipulated independently from each other or in concert with each other. To extend operability a lot of producers are digitising their existing analogue data, usually in raster-format. Seeing the benefit of promotion of and the need for a higher return on operating costs producers started to think of ways to make these data more accessible. As the economic stakes are higher then before they sought to create a descriptive system, which incorporates not only data usually associated with ISBD's but also data, which could help users to evaluate and analyse the fitness of use and quality of the digital spatial data offered.
Examples of these standards are ANZLIC[38] (Australia & New Zealand), FGDC[39] (USA), CEN[40] (Europe) and ISO[41] (global). The latter two probably will come formally into existence in 2001. The ICA Spatial Data

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[34] The British Library (1999). *MARC home page*. BL <http://www.bl.uk/information/marc.html> [Accessed: 25 January 2001]

[35] MARBI (1996). *The MARC 21 Formats: Background and Principles*. LoC <http://www.loc.gov/marc/96principl.html> [Accessed: 25 January 2001]

[36] The British Library Executive Committee (2001). *MARC harmonisation* : British Library to adopt the MARC21 format : Survey results. http://www.bl.uk/services/bsds/nbs/marc/result1.html [Accessed: 29 January 2001].

[37] Network Development and MARC Standard Office (1999). *MARC DTD's, document type definitions, background and development*. LoC <http://lcweb.loc.gov/marc/marcdtd/marcdtdback.html> [Accessed: 25 January 2001]

[38] ANZLIC (1998). *Core Metadata Elements for Land and Geographic Directories in Australia and New Zealand*. ANZLIC <http://www.anzlic.org.au/metaelem.htm> [Accessed: 24 April 2000]

Standards Commission will publish in 2001/2 a book, which will compare all available national and international metadata standards and –systems, alike to their book on transfer standards[42].
As a lot of data is needed for the evaluation- and analysis-processes the records can run in the hundreds of elements and be anywhere between a few thousand and tens of thousands bytes. As such they can be also used as tools to administrate the datasets they describe.
Though one of the complaints concerning records created with these standards could be that they need a high amount of manual input I guess that better programming of the metadata-module within spatial datasets could help automated processing of numerical values (e.g. object-count) and other automatically generated data (e.g. geometric base values) in the metadata-records.

Towards meta-information systems?
In band IV-descriptions it is already possible to add metadata concerning the administration of the metadata. The metadata itself can provide information to assist in developing migration/emulation processes and to check whether these processes have functioned adequately. Metadata can help in ensuring the level of integrity of the data after necessary manipulations to preserve them for future use. They help to answer the question whether the data have the same information value and quality as before the manipulations took place and at the same time whether unavoidable losses can be qualified[43].

This drive is also detectable in the NEDLIB[44] (Networked European Deposit Library)-project, funded partially by the European Commission's Telematics for Libraries Programme. One of the reports[45] concerns itself with metadata for long term preservation of electronic publications, based on the OAIS information model[46]. The different kinds of metadata described in this report are:

1. Descriptive metadata
2. Administrative metadata recorded for the deposit system management purposes
3. Metadata for preservation

The descriptive metadata can be the same as generated in band II-IV-descriptions, the administrative metadata can be the same as that generated in Band IV-descriptions. The metadata for preservation are a new subset and are used to monitor the actions needed for the long-term preservation of the content information. In the Nedlib report the following elements are given for a "core preservation metadata set"[47]:

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[39] FGDC (1998). *Content Standard for Digital Geospatial Metadata* (FGDC-STD-001-1998). FGDC <http://www.fgdc.gov/metadata/contstan.html> [Accessed: 25 January 2001]

[40] CEN/TC287 (1999). *The Geographic Information European Prestandards and CEN Reports*. AFNOR <http://forum.afnor.fr/afnor/WORK/AFNOR/GPN2/Z13C/PUBLIC/WEB/ENGLISH/pren.htm> [Accessed: 25 January 2001]. To view the full pre-standard you need to contact a CEN-member.

[41] ISO (2001). *ISO/TC 211 Programme of Work*. ISO < http://www.statkart.no/isotc211/pow.htm> [Accessed: 25 January 2001]. To get access to the documents and the document catalogue, you need user-id and password. Please contact your national body to get this information.

[42] Moellering, Harold (ed.) (1997). Spatial database transfer standard 2: characteristics for assessing standards and full descriptions of the national and international standards in the world. Pergamon.

[43] Smits, Jan (1999). *Metadata: an introduction*. In: Andrew, Paige G. and Larsgaard, Mary Lynette. *Maps and related cartographic materials: cataloging, classification and bibliographic control*, p. 313.

[44] While supplies last all reports (up till now some 7 reports have been published) can be requested free of charge from the Koninklijke Bibliotheek by filling in the Nedlib-orderform at www.kb.nl/nedlib/

[45] Lupovici, Catherine [and] Masanès, Julien (2000). *Metadata for the long term preservation of electronic publications*. Koninklijke Bibliotheek. (Nedlib report series ; 2).

[46] CCSDS 650 0-R-1: *Reference model for an Open Archival Information System(OAIS)*. Red Book. Issue 1. May 1999. http://ssdoo.gsfc.nasa.gov.nost/isoas/ref_model.html [Accessed: 5 February 2001]

[47] Lupovici, Catherine. Ebenda, pp. 17-21.

- Specific hardware requirements
- Specific microprocessor requirements
- Specific multimedia requirements
- Specific peripheral requirements
- Operating system
- Interpreter and compiler
- Object format
- Application
- Reference information
- Assigned identifier
- URL
- Fixity information
- Checksum
- Change history
- Main metadata concerned
- Tool
- Reverse
- Other metadata concerned

When we take a closer look at some of these elements we see that they have the same function as the data concerning electronic publications in the ISBD(ER), except that in the latter they are relegated to the note-area and are summarized within one element. The Nedlib report is ahead of a possible extensive expansion of the formats used for bibliographic library systems, which eventually might evolve into all-encompassing meta-information systems.
Not all of the necessary metadata needs to be manually processed. When one imagines the repository as a totally integrated system of DLOs and metadata with all relevant links available than an automated processing system can retrieve all the necessary metadata from the actions implemented for its preservation in the repository and add these to the relevant metadata-record(s). Instead of relying entirely on the prescience of the cataloguer, a digital library might allow direct search of the contents of an information object, particularly for domain-specific information or minor detail that a cataloguer might normally ignore[48].

When we take a sharper look at the metadata-systems we can see a lot of similarity, but also a lot of divergence. Not so much in the content of the metadata as well in the way they function at the input- or the output level.

[Amalgamated diagram for the main metadata-concepts]

At the Input side one must image that at the moment physical information resources and DLOs are offered to be accessed. Most of these are still manually processed by cataloguers. Some of the data the cataloguer extracts from a template which is included in DLOs. But one can also image that a computer-program extract this information as it recognizes the codes with which certain elements are tagged. Furthermore scripts may be running behind the screen which extract specific metadata for specific purposes which are not needed for traditional catalogue-output, as is the case e.g. with the Nedlib data. This puts a large burden of responsibility on the creator.

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[48] Goodchild, Michael F. (1995). *Alexandria Digital Library. Report on a workshop on metadata held in Santa Barbara, California, November 8, 1995.*
http://www.alexandria.ucsb.edu/publicdocuments/ metadata/metadata_ws.html [Accessed: 15 February 2001].

The diagram tries to place each element or group of elements within the metadata-systems described above into an overall metadata-information diagram. This does not tell anything about the format or formats used, as long as they are interoperable and can be queried with the same protocols.
I am not sure yet of the position and function of each element or group of elements. At the moment there is still a confusion of definition as specific metadata-systems explain the use of the metadata according to the functions they get assigned. E.g. assigning headers of technical information to image-files might be added to the element "specific material designation / Coverage", but might come also under "Administrative metadata". It is somewhat unbalanced because elements and groups of elements seem to have the same weight. That is because of the following reasons:

- metadata systems are still predominantly descriptive;
- FGDC/ISO is so voluminous in elements that it wouldn't make the reader wiser when they were all included and so they are grouped together;
- Administrative, structural and preservation metadata are innovative and not yet fully recognized.

'Relation' as used in DC might be structural metadata; and 'rights' may be seen as administrative metadata. When we consider what the Library of Congress[49] and Cornell University Library[50] mean with structural data we might get confused. LoC's seems to me somewhat the same as FGDC's 'Data quality' and 'Entity and attribute information'. In this case I have preferred Cornell's explanation, though 'standard relationships' might be the same as 'series / relation'. Both are still in-house systems and thus the notation in the diagram is 'unknown'. Under which element or group of elements comes the check for integrity and authenticity is also uncertain.

Seen from the output side it might be necessary to extract metadata from different formats, as this is functionally dependent. Should crosswalks between the diverse formats be necessary to effectuate certain output this should be done behind the screen without bothering the user. The five output systems are put tentatively opposite the (groups of) elements from which they extract their metadata. At the moment this looks to be biased against the innovative systems, but in future I think, when seen the amount of metadata used, the opposite will materialize.

But this diagram is mainly meant to foster discussion as to what metadata might/should/can cover and for what purpose they might be used.

In a later stage the input-side will change radically. In the case that all information resources become DLOs or databases metadata will be inherently part of them and obviously will be extracted mainly by computer programs. Catalogers then will be assigned the functions of checking and validating.

Again DLOs vs databases

The developments sketched in the above paragraphs deal, however, mainly with DLOs. Geodata also will be partly created as DLOs, but the larger part, I believe, will be created in databases, where the entities and their attributes will not have a specific function unless they are generated for a specific purpose. In other words they are but variable instantiations within a specific timeframe. The generated images or other forms of output may be referred to as fixed document like objects (see note 4) and may be in need of the same description and preservation metadata when they are preserved within a repository system[51]. Such a generating process in itself, however, will not alter the inherent qualities of the data in the databases.

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[49] LoC (1999). Structural Metadata Dictionary for LC Digitized Material. Version 1.03. http://memory.loc.gov/ammem/techdocs/repository/structmeta.html [Accessed: 21 February 2001]

[50] Cornell University Library (2001). Moving theory into practise : Digital imaging tutorial. Chapter 5: Metadata. http://www.library.cornell.edu/preservation/tutorial/metadata/metadata-01.html [Accessed 21 February 2001]

[51] I believe that examples of these generated fixed DLOs should be preserved in order that future users can obtain knowledge of part of the historical context during the lifetime of the databases.

"In the long term metadata … will evolve to support a hierarchy of different levels of abstraction, and different degrees of expertise on the part of the user. Moreover, the traditional concept of the map sheet or image scene, which currently dominates the granularity of information is GIS-databases, is likely to be replaced by geographical seamlessness"[52]. One of the problems which will produce a lot of discussion in the near future is the *granularity*[53] of information to be accessed, i.e. what is the detail of the unit of information which should be considered to merit specific descriptive attention. "In the digital world, granularity of information may take on an entirely new and unfamiliar forms that are no longer linked to the granularity established by the author or publishers"[54].

Producers of geographical databases will find a descriptive format to describe not only their contents[55], but what is more important, to describe the potential uses to which the data in their databases can be put to. What really is lacking are search strategies for the data to mold one's image of a specific or combination of (a) geospatial phenomeno(a)n or how to find the spatial data which can help us with decision support, prediction, forecasting and estimation of a specific spatial phenomenon or combinations of spatial phenomena.

For such processes metadata are inadequate as we are interested then in the inherent qualities of spatial data and their attributes, topology to or combination with other spatial data. This also independent of the geometric and geographic constraints a producer might have put to demarcate its database. And then we haven't thought yet about the locational data, which may guide us to non-geospatial resources, which can help us to put a possible geospatial image into an overall context.

To imagine how innovative concepts interact with our traditional view of accessing data I have added Band V to the diagram. But a thick line from the other four bands separates this band. It is questionable whether it can be added to the diagram as the functioning which can be described therein might be incommensurate with the other bands and might belong to another paradigm. But for the sake of proposing innovative technologies I have added it anyway.

The next paragraphs will deal with the possible innovative technologies which might help us to find the 'gems of information' we are looking for.

Making locational data available

Locational information can be found in many more resources than only cartographic materials or geospatial databases. When we look at documents and databases concerning statistics, history, biology, ecology, travel, etc., many of these are concerned with a certain location on earth. In traditional library-catalogues these are mainly accessed by subject matter, but not according to geographical area. It is my opinion that a researcher is always searching for a body of interrelated information, which will provide knowledge for the subject he/she is working on. And we would like geographic information to be studied in context, which means textual and statistical resources should be available at the same time.

Of course we can use the traditional geographical- and subject dictionaries and thesauri for this purpose, but why not use the unique mathematical properties of maps in an age where visual information and the possibility of aggregating information in graphical representations are becoming more and more predominant. When we can translate subject thesauri for locations (like Amsterdam, The Netherlands, U.S.A., etc.) through a conversion table to bounding-box or point co-ordinates the same interface might be used for directing users to these non-map resources.

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[52] Goodchild, Michael F. (1995). Ebenda.

[53] A meta-data entity that is associated with the lowest level of granularity of information available to InfoHarness is called the information unit (IU). The IU may be associated with a file (e.g., a man page), a portion of a file (e.g., a C function or a database table), a set of files (e.g., a collection of related bitmaps), or any request for the retrieval of data from an external source (e.g., a database query).
Leon Shklar, Leon et al. (1994). *"InfoHarness" Information Integration Platform*.
http://www.ncsa.uiuc.edu/SDG/IT94/Proceedings/Searching/shklar/shklar.html

[54] Goodchild, Michael F. Ebenda. One can imagine that automated modules tag every distinct unit of information within a database with metadata which is taken from the structuring principles of this database, e.g. geometric, representational and/or qualitative attributes. When we come to knowledge discovery and datamining this might well be necessary, but it does not need manual input!

[55] For this purpose they can use the FI-standards.

The problem is best described in a paper by Ray R. Larson[56], which discusses geographic information retrieval (GIR) within the Alexandria Digital Library project for both map-like spatial objects as well as georeferenced material. "As with traditional print libraries, […] information can be indexed and retrieved in a variety of ways, ranging from purely descriptive cataloguing of items in the database and topical analysis of content, to more specialized methods of classification and description that exploit the characteristics of digital information". It not only describes the background but also discusses some tools for automated geo-referencing of text.

Larson describes and summarises the GIPSY-model. GIPSY, The Geo-referenced Information Processing System, was developed as a new model of automatic geographic indexing for text documents. In the GIPSY model, words and phrases containing geographic place names or geographic characteristics are extracted from documents and used to provide evidence for probabilistic functions using elementary spatial reasoning and statistical methods to approximate the co-ordinates of the location being referenced in the text. The actual "index terms" assigned to a document are a set of co-ordinate polygons that describe an area on the Earth's surface in a standard geographical projection system. Woodruff and Plaunt describe the GIPSY method for automatic geo-referencing in detail[57]. Later this method was evaluated, together with the POSTGRES method and the TextTilling method in a paper for the Sequoia 2000 project[58] in the framework of the Global Change programme.

One of the next big projects within ADL is to take all the catalog records from the UCSB Library's online catalog that have geographic subject headings, then apply coordinates to each record, put the records in the ADL Catalog, and see if the resulting searches are as helpful to the users[59].

On the Internet several (proto)types of Geographic Information browser, which can perform this kind of function we are looking at, are available, e.g.

- The Environmental Resources Information Network [ERIN] Unit of Australia has developed a generic WWW map interface using a collection of simple map images and a standard lookup table to provide visual interactive access to geographically related information[60].
- MERI (Meadowlands Environmental Research Institute, New Jersey, U.S.A.) built a WWW-based interface to the database, integrating web server, database server and GIS server technologies. Through a map interface, a user can obtain a list of documents that studied a particular area. Conversely, through a text interface, a user can obtain a list of documents that report on, for example, a land use or cover type or a specific water body, with sampling/analysis locations displayed on a map[61].

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[56] Larson, R. Ray (1996). *Geographic information retrieval and spatial browsing*. In: GIS and Libraries: Patrons, Maps and Spatial Information (ed. by Linda Smith and Myke Gluck), pp. 81-124 http://sherlock.berkeley.edu/geo_ir/PART1.html (preprint) [Accessed: 27 September 2000].

[57] Woodruff, A.G. & C. Plaunt (1994). *GIPSY: Geo-referenced Information Processing System*. In: Journal of the American Society for Information Science, 45, pp. 645-655.

[58] Larson, Ray R. et al. (1995?). *The Sequoia 2000 Electronic Repository*. In: Digital Technical Journal. 7(1995)3, pp. 50-65. http://www.digital.com/DTJJ04/DTJJ04SC.TXT (preprint) [Accessed: 28 September 2000].

[59] E-mail communication by Mary Larsgaard, Map and Imagery Laboratory, Davidson Library, University of California, Santa Barbara (13 February 2001).

[60] Crossley, David & Tony Boston (1995). *A generic map interface to query geographic information using the World Wide Web*. http://www.csu.edu.au/special/conference/apwww95/papers95/dcrossle/dcrossle.html [Accessed: 24 September 2000].

[61] Barrett, Kirk R. , Richard Holowczak & Francisco J. Artigas (1999). *A database of environmental documents about an Urban Estuary, with a WWW-based, geographic interface*. http://www.awra.org/proceedings/www99/w21/ [Accessed: 27 September 2000].

An atlas as a geographical interface

As an example I would like to sketch a project that was drafted in co-operation with some university departments of cartography in The Netherlands. The idea is to have maps function not only as geographical information sources, but research whether it is possible to have the same maps function as visual interface for metadata-databases. For this project we looked at three possible databases, which could function together within this frame.

1. NCGI[62]: This metadata-database of the National Clearinghouse Geo-Information contains presently more than 1,500 descriptions of digital spatial datasets with visual examples of some 17 producers of geospatial data. The datasets range from several 100s Mb to 10s of Gb.
2. AvN: The second analogue edition of the Scientific Atlas of The Netherlands (AvN, published 1984-1990) contained some 1,000 maps, which give a comprehensive view of the socio-economic, physical and ecological situation of The Netherlands. These maps are now digitised[63], but give not up to date information.
3. There is a database of some 30-40,000 descriptions of cartographic documents concerning The Netherlands within the framework of the Dutch Depositary collection in the Royal Library. The Royal Library phased out the CCK-system[64] in 1999 and will convert these descriptions between 2001-2002 to the PICA[65]-database.

The NCGI concerns mainly large-scale datasets with a high economic value. The owners of these datasets, which are usually (semi)governmental or academic bodies, are usually forced to recoup part or most of the costs involved in producing these data. At the same time these producers aggregate these data into the middle- and small-scale data necessary to create the maps used in the Scientific Atlas of The Netherlands. In the age of analogue products they did this service for free. But in the digital age it is hard to get the same services from them. This means we must find a modus to entice them in such a way that they are willing to create and provide these data for free. We think we can reach this goal by offering the maps of the Scientific Atlas of The Netherlands as a visual geographical interface for the NCGI.

The geographical interface would provide several search strategies:

1. When clicking on a map of The Netherlands one can search the underlying metadata-databases for datasets that also cover the whole of The Netherlands.
2. When making a cut-out of a part of The Netherlands one can search the underlying metadata-databases for datasets that also cover that part of The Netherlands.
3. When one zooms in the interface will query the underlying metadata-databases for datasets, which cover that specific part of The Netherlands.

The queries will be effectuated by mainly using bounding-box co-ordinates. There must be, however, also possibilities for searching on point locations, within a radius of a point, a bounding polygon, etc., and when the computer can read the index-map also on named area, administrative sub-division or locality description, when necessary using a thesaurus. But it must be also possible to use traditional geographic and thematic dictionaries to come to the same result.

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[62] NCGI (2000). Geo-gids. http://www.ncgi.nl/Profiel/profiel.html [Accessed: 24 September 2000].

[63] Disciplinegroep Kartografie (2000). *Atlas van Nederland.* http://avn.geog.uu.nl/ [Accessed: 24 September 2000]

[64] VELDEN, G.J.K.M., P.J.M. Douma and J.G. Zandstra (1990): *CCK : making cartographic materials accessible.* In: The LIBER Quarterly 2(1992)2, pp. 192-208.
http://www.kb.nl/infolev/liber/articles/cck.htm [Accessed: 24 September 2000].

[65] PICA (2000). *About Pica.* http://www.pica.nl/en/about/ [Accessed: 24 September 2000].

[Diagram of a visual geographic interface]

We try to sell the idea to the producers as follows. Is there a better way then the one described above to advertise the economically interesting datasets through such an interface and at the same time service education and the general cause! Because the Scientific Atlas of The Netherlands will not only function as a visual geographical interface, but at the same time will be an informational and educational resource. The educational functions will be enhanced and become interactive when an Online Mapping Application (OMA) will be incorporated with which users can manipulate certain aspects of the maps offered. Maps produced with this application can be selected by an editor and added to an archive to serve as examples for future users. At the same time some scanned samples of newspaper-maps have been added to the present database to get or give some insights in what way mass media use scientific mapping data to inform the public in general. In future digital maps from newspaper-archives could be downloaded to a sub database of the Scientific Atlas of The Netherlands and have the same function as maps added from the OMA-activities.

But why should we restrict ourselves to spatial metadata-databases for digital materials and not try to include metadata-databases for analogue materials. As long as the descriptions include geographical bounding-box co-ordinates the same kind of queries can be made on bibliographic databases as can be made on the NCGI-database. Because researchers require disparate sources to do their research, and because not all necessary information will be available on the Internet or in ready digital form, it would be a miss when bibliographical databases are left out of this scheme. The 30-40,000 descriptions of maps, which will be loaded into the PICA-database, contain all the necessary geometric or mathematical data necessary to use the query-functions as envisaged with the NCGI.
Furthermore the idea of one-stop-shop information gathering is so prevalent that we must do our utmost to realise this concept with the tools and all the data available.

Conclusion

In my opinion the metadata field will be expanding exponentially in contrast to the wish for basal descriptions as heralded in IFLA's *FRBR*[66]. But the burden of this growth will be put on the shoulders of the creators and the software programmers. Furthermore metadata will be used for a spectrum of functions, ranging from access to preservation. Once a metada-record has been created it will be constantly added to depending on the need for transformation to keep a DLO or database available for use. Cataloguers will become metadata information system managers and keep themselves busy with checking and validating the input. We also will create innovative user-interfaces which will replace the traditional listings. The most uncertain part of this set up is how the growth of databases will relate to the growth of DLOs, especially in the geospatial field. And in how far knowledge discovery and data mining, which are autonomous processes related to databases, will replace the need for metadata, except as internal checks and validations.

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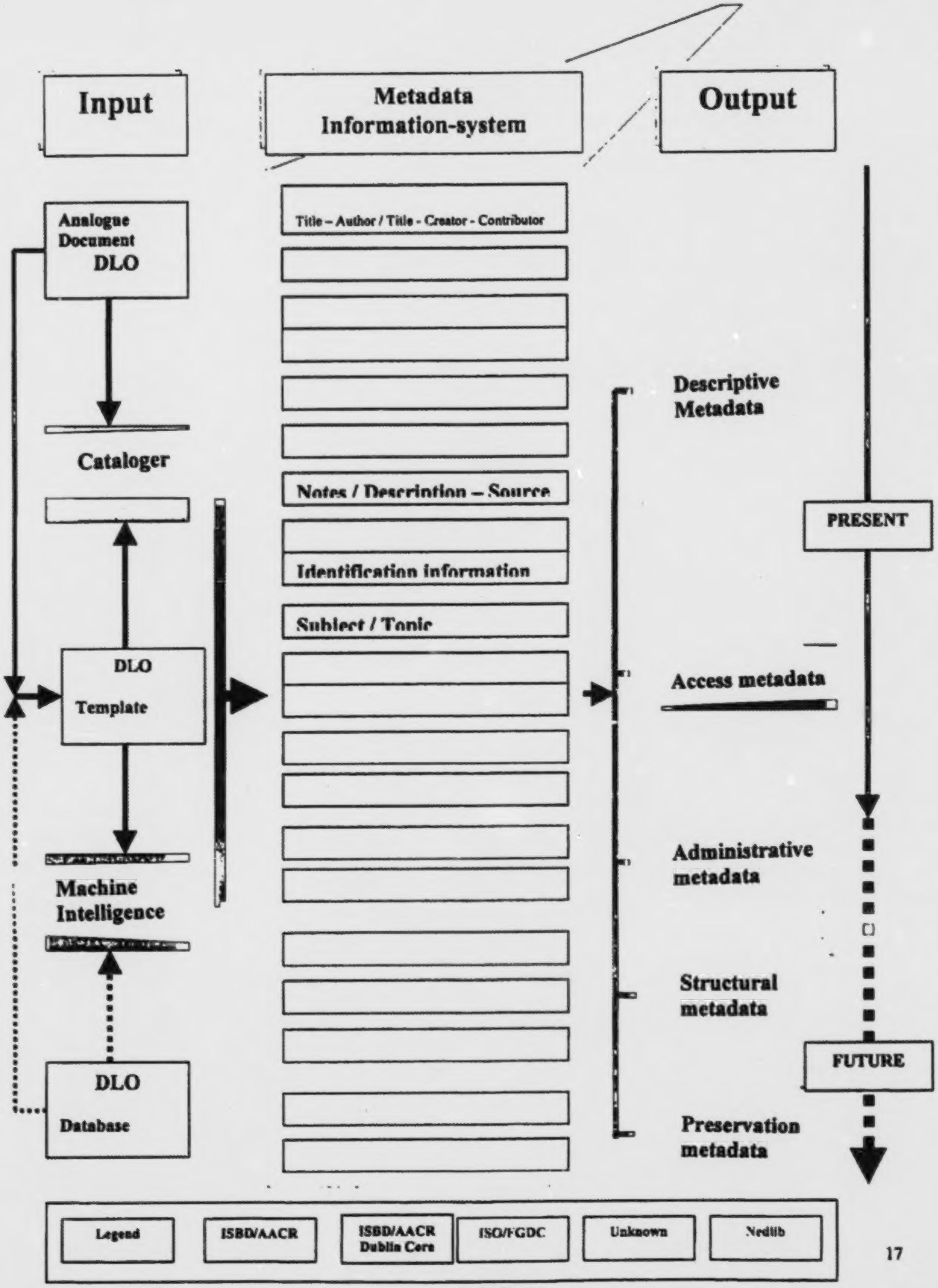
[66] IFLA Study Group on the Functional Requirements for Bibliographic Records (1998). *Functional requirements for Bibliographic Records* (UBCIM publications - new series, Vol. 19).
Also available through <http://www.ifla.org/VII/s13/frbr/frbr.pdf> [Accessed: 24 September 2000]



Input

Metadata Information-system

Output

Analogue Document DLO

Cataloger

DLO Template

Machine Intelligence

DLO Database

Title – Author / Title - Creator - Contributor

Notes / Description – Source

Identification information

Subject / Topic

Descriptive Metadata

Access metadata

Administrative metadata

Structural metadata

Preservation metadata

PRESENT

FUTURE

Legend

ISBD/AACR

ISBD/AACR Dublin Core

ISO/FGDC

Unknown

Nedlib

Quality	Simple	===========>	===========>	Rich	
Quality Level	Band I	Band II	Band III	Band IV	
Diffusion	===========> +++++++++>	===========> +++++++++>	<========== ==========> ++++++++++>	<========== +++++++++	
Availability	Internet	Internet	Internet / Intranet	Internet / Intranet	Intranet
Purpose	Location	Selection	Evaluation	Analysis	Intelligent analysis
Unit of information	Individual digital information object	Logical set of digital objects; no links between documents	Publication; links between whole and parts	Databases with links between whole and parts on all levels	Databases with geometric links between whole and parts on all levels.
Standards	Proprietary	Emerging standards	Generic standards used in information world	Standards used in specialist subject domains	Intelligent software-modules
Form of record	**Proprietary simple records**	**Dublin Core**	**AACR2, ISBD**	**FGDC, CEN, ISO, ANZLIC**	**Not applicable**
Format	Unstructured	Attribute value pairs **Dublin Core**	Subfields, qualifiers **MARC** **USMARC** **UKMARC** **UNIMARC** **MARC21**	Highly structured mark up **FGDC DTD** **ANZMETA**	**Deriving from Knowledge Discovery and Data Mining**
Conservation			Nedlib	Nedlib	**Not applicable**
Input	Robot generated	Robot plus manual input	Manually input	High level of manual input	**Intelligent expert system**
Conversion		DC/MARC/GILS	MARC2DC MARC2FGDC	FGDC2MARC	**Not applicable**
Protocol	http with CGI form interface	directory service protocols (whois++) with query routing (Common Indexing Protocol)	Z39.50	Z39.50 (in future with collection navigation)	**Collection navigation**

Diagram of access- and retrieval systems

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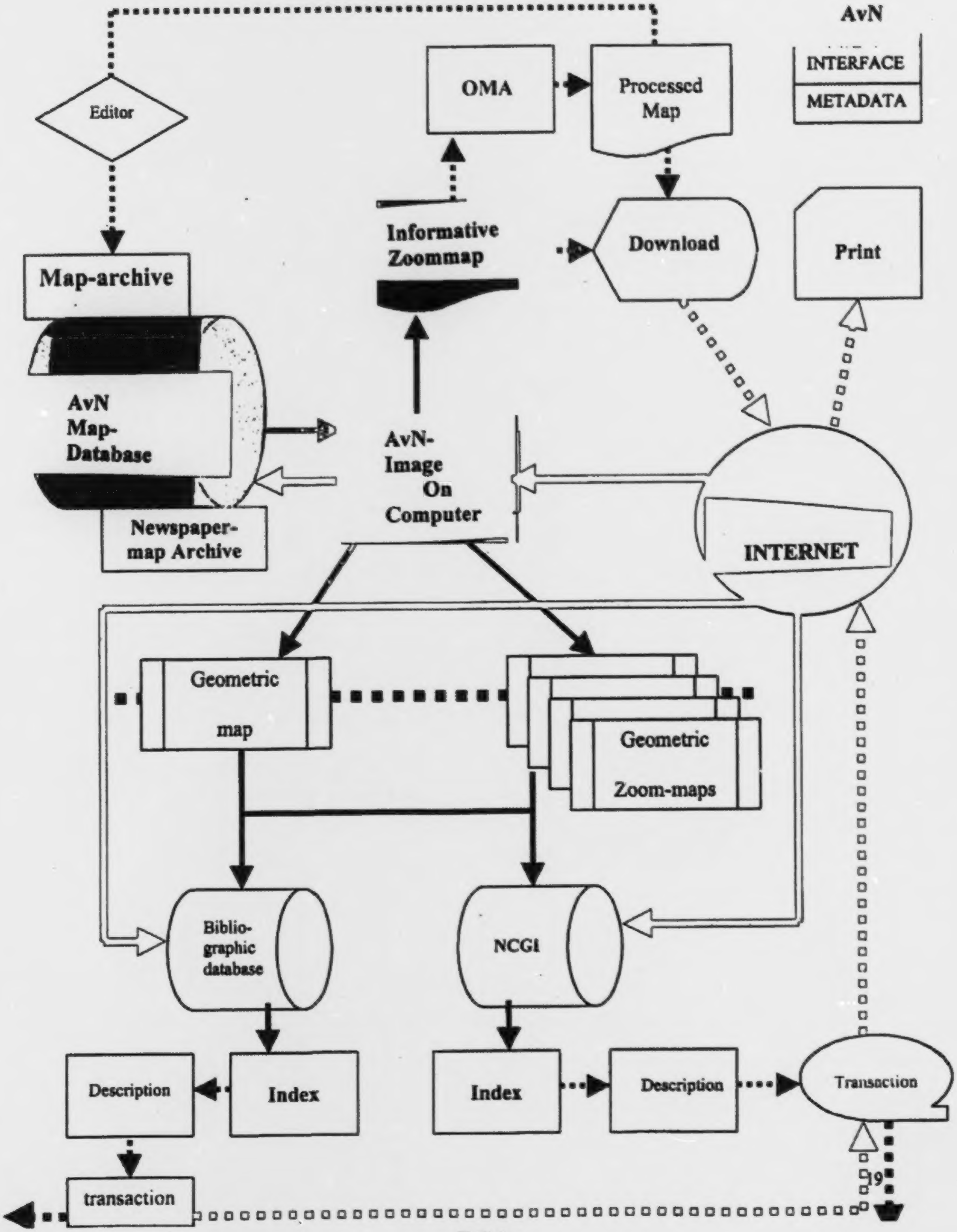
AvN
INTERFACE
METADATA
Editor
OMA
Processed Map
Informative Zoommap
Download
Print
Map-archive
AvN Map-Database
Newspaper-map Archive
AvN-Image On Computer
INTERNET
Geometric map
Geometric Zoom-maps
Biblio-graphic database
NCGI
Description
Index
Index
Description
Transaction
transaction
19

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Joint Meeting with: -
Meeting Number: 166
Simultaneous Interpretation: -

Naming the Landscape: Building the Connecticut Digital Gazetteer

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Introduction

Ubi or Where is…?

It is doubtful there is a map librarian alive (or dead for that matter) who has not pondered a scrap of a map and wondered… where… is it from, does it go, or does it show?

When one puts in hours on the university library's general reference desk, the prevailing question is… *ubi?* For example, where can I find a poetry criticism, a citation, and an article on the national energy policy… *ubi?*

It is reasonable to go to a map when we ask, "*ubi*." But when we go to the library catalog and ask "where," we must do it with a textual search. A map, however, illustrates topological relationships; relationships of 'near-ness,' 'in-ness' and 'far-ness.' Text does not. Text does not indicate that Chicago and China are worlds apart; in fact, the text-based catalog puts them rather close to each other, alphabetically, on the screen. A map interface would indicate where Chicago and China are in relation to each other, and would indicate that Zinjiang is in China… even though it is quite far from it in the catalog. A map interface, a graphical… cartographic interface has the potential of enhancing access to the catalog for many users.

In order to use a cartographic interface to textual place-names in an on-line catalog we must provide the names with spatial awareness. The names must be in a coordinate system. In order to make use of topological relationships, the place-names must have areal geometry from which spatial neighbors can be derived. A digital gazetteer must be built which geographically enables the on-line public access catalog (OPAC). Such a tool has precedence in the Digital Library and Digital mapping research initiatives of the past decade.

In this paper we aim to provide a basic background of building the *Connecticut Digital Gazetteer* by briefly describing some of the primary research initiatives such as distributed geolibraries and the development of digital gazetteers. We will then describe the processes and framework for building the *Connecticut Digital Gazetteer*. We will conclude by providing a vision of digital gazetteers.

Distributed GeoLibraries

In June, 1998 the National Academy of Science's Mapping Science Committee convened a workshop to explore:

- a vision for geospatial data dissemination and access in 2010
- comparisons of different efforts in digital library research, clearinghouse development and other data distribution
- suggestions of short and long term research needs
- identification of policy and institutional issues

> "The Mapping Science Committee serves as a focus for external advice to federal agencies on scientific and technical matters related to spatial data handling and analysis. The purpose of the committee is to provide advice on the development of a robust national spatial data infrastructure for making informed decisions at all levels of government and throughout society in general."[i]

The National Academy of Sciences' Mapping Science Committee (MSC) has been directing research initiatives since its 1993 report *Toward a Coordinated Spatial Data Infrastructure for the Nation* [ii]set the stage for the National Spatial Data Infrastructure (NSDI). The report established the Federal Geographic Data Committee (FGDC) and the FGDC's Spatial Metadata Content Standards. Subsequent MSC reports have addressed specific components of the NSDI, including: partnerships in *Promoting the National Spatial Data Infrastructure Through Partnerships*,[iii] in 1994, basic data types in *A Data Foundation for* *the National Spatial Data Infrastructure*[iv] in 1995, and future trends in *The Future of Spatial Data and Society*[v] in 1997 and most recently *Distributed Geolibraries; Spatial Information Resources*[vi] in 1999.

The June 1998 workshop met to build a national vision of a GeoLibrary. The participants asked:

- What will it take to build distributed geolibraries?
- What economic incentives can be put in place such that stakeholders in all sectors of the community (business, education, and government) can and will participate?
- What arrangements need to be put in place in the form of institutions, regulations, standards, protocols, committees, and so forth?
- What research needs to be done to address problems and issues for which no methods or solutions currently exist?
- What data sets need to be constructed, and what mechanisms might be used?
- What software needs to be written, and who is likely to write it?

These are the questions that are driving current national and international research agendas in the mapping sciences. The digital gazetteer has emerged as part of that research agenda.

Digital Gazetteers

A preliminary study of digital gazetteers was held at the Smithsonian Institution in Washington, D.C. in October 1999. The goals of the two-day workshop were to (1) develop an understanding of the potential of indirect spatial referencing of information resources through geographic names and (2) to identify the research and policy issues associated with the development of digital gazetteer information exchange.

> The development of interchangeable sets of geographic name data (gazetteers) and interoperable gazetteer services could result in a major improvement in seamless access to and use of a wide variety of information resources through indirect geospatial referencing. The two-day workshop was convened (1) to develop an understanding of the potential of indirect spatial referencing of information resources through geographic names and (2) to identify the research and policy issues associated with the development of digital gazetteer information exchange. -- The vision developed at the workshop is the Digital Earth metaphor for organizing, visualizing, accessing, and communicating information provides a powerful enabling framework for marshalling the resources needed to understand and mediate environmental and social phenomena.[vii]

Definition and scope of digital gazetteers

With three key attributes, a gazetteer supports several functions of an information retrieval system:

- It answers the "Where is" question (for example, "Where is Storrs?") by showing the location on a map.
- It translates between geographic names and locations so that a user of the information system can find collection objects through matching the footprint of a geographic name to the footprints of the collection objects. For example, "What aerial photographs cover parts of Tolland County?"

- It allows a user to locate particular types of geographic features in a designated area. For example, the user can draw a box around an area on a map and find the schools, hospitals, lakes, or rivers in the area.

Beyond these basics, a digital gazetteer needs to support:

- the representation of variant names
- information about the names such as authority, etymology, source, and time span for the use of the names geographic footprints (coordinates representing point, bounding box, polygonal, and linear features) information about footprints such as accuracy, measure method, source, and time span
- descriptive text
- data such as population and elevation, and
- relationships between named places (e.g., an IsPartOf relation between a city and a county).

Building the Connecticut Digital Gazetteer

Technical Considerations

We imported GNIS data from the Alexandria Digital Library (ADL)[viii] and stored the data in a local Oracle database. The ADL gazetteer, designed by University of California, Santa Barbara, is a relational database schema[ix] based on the ADL Gazetteer Content Standard[x] and implemented on an Informix RDBMS. Although Informix and Oracle are both relational databases, to import data from Informix database to the Oracle database directly is not convenient. We used XML data format as middleware for importing the Geographic Name Information System (GNIS) thesaurus (described below). XML is become the standard for information interchange, due to its flexibility and simplicity. The designation of both DTDs for the XML documents and the relational database schema are based on ADL Gazetteer Content Standard, however, there where some differences between the relational database schema and the DTD for XML data. So to import XML data into our Oracle database, our solution proceeded in three steps:

1. We parsed the XML documents to machine-recognizable elements. We used Xerces-1_0_3 which is a XML parser from Apache[xi] to do the parsing.
2. We built the database schema for our local Oracle system. Since the designation of the relational database schema ADL gazetteer use is based on the gazetteer content standard, and the schema provides portability to all RDBMs, we borrowed the schema and use it on our Oracle system.
3. We observed the difference between the DTD and database schema, and developed a mapping method that maps the XML data into our Oracle database.

To extend our GNIS database, we added data from *Connecticut Place Names* (CPN) gazetteer of historical place names. Here we also proceeded in three steps:

1. We scanned the whole book and used OCR to recognize its characters and saved the data in text files.
2. We built a parser with Java code which parsed the text file and extracted three types of data for each record of place, they are 'place name,' 'geographic type of the place,' and 'citations' for each record.
3. Finally we joined the CHS data to the existing records in GNIS database and stored them in related fields.

Identifying Spatial Extents of Populated Places

The GNIS has identified many types of geographic features as points on a map, including Populated Places (ppl) and streams. It is possible to find the spatial extents of many of those named features using Geographic Information Systems (GIS) software and geospatial data.

Of the many themes of geospatial data available, the one that has been extremely useful in identifying the spatial extents has been the Land Use / Land Cover (LU/LC) data classified from the LANDSAT Thematic Mapper satellite imagery. This classification was done by the University of Connecticut's Laboratory for Earth Resource Information Systems (LERIS) within the Department of Natural Resources Management and Engineering. The resulting data set is a 1998 LU/LC grid of 30 by 30-meter cells covering the entire state of Connecticut. The data have been processed into 28 classes, including residential, commercial, farmlands, forests, etc.

Using this data we can identify cells which we consider urban centers or built up areas by aggregating the following four classes of data into polygons: urban residential, medium residential, rural residential and tree and turf complex. Most of these polygons can then be considered populated places. Then, using capabilities available in GIS and database management utilities, such as spatial overlays and text joins, polygons can be selected or excluded and assigned the information from the GNIS ppl points. Thus, we are transferring the named point to an inferred polygon.

Problems may occur when the urban centers are not separated from each other in the LU/LC data due to connected development or urban sprawl. In this case a single polygon may contain several ppl points. Clipping the polygon by known administrative boundaries can sometimes solve this problem. In Connecticut, these are town boundaries. Other times a named ppl will occur where there is no identifiable development in the LU/LC data. In this case the ppl may be a historical place, or a cartographic "locator" with not enough development to be identified. We have found that a significant number of these Populated Places are road intersections that may have been more populous or otherwise significant in the past.

Identifying streams is an easier task since the Connecticut Department of Environmental Protection (ConnDEP) has processed the hydrographic data set (vectors from USGS 1:24,000 Digital Line Graphs) from the GNIS. Similar processes of text joins and spatial overlays can be used to merge the GNIS identification numbers to these streams and to place the GNIS names into unnamed or misnamed streams. Problems arise where there are gaps in the streams due to lakes or marshes that have not been identified by the ConnDEP as part of the stream.

Some problems arise when the urban centers are not separated from each other in the LULC data due to connected development, or urban sprawl. In this case a single polygon may contain several ppl points. Clipping the polygon by known administrative boundaries can sometimes solve this problem. In Connecticut these are town boundaries. Other times a named PPL will occur where there is no identifiable development in the LULC data. In this case the PPL may be a historical place, or a cartographic "locator" with not enough development to be identified. We have found that a significant number of these ppls are "Corners" which may have been more populous in the past.

Connecticut History Online

In 1999 the Thomas J. Dodd Research Center at the University of Connecticut, the Connecticut Historical Society and the Mystic Seaport Museum partnered in the Connecticut History Online project.[xii] The project is partially funded by a National Leadership Grant from the Institute of Museum and Library Services (IMLS). The current collaborative grant will contain a total of about 14,000 historical images from the partners' historical photographic collections. These images can be searched or browsed in variety of ways, including by keyword, subject, creator, title and date. Geographical sites may be searched using a digital gazetteer developed by the University of Connecticut's Map and Geographic Information Center. Descriptions of the images are included in detailed cataloging records.

The selection criterion included knowing the geographic place of the photograph. Selectors were asked to select only those photographs whose place was identified. The catalogers, working with the MARC format, noted the place in locally adapted 651 field. The 651 field provides the most 'hooks' for a digital gazetteer, particularly the 2nd indicator '7' and the delimiter '2' 'Source of heading or term.' enable the Digital Gazetteer to process most efficiently.

The catalogers were instructed to use one of four thesauri, *gnis*, the Geographic Name Information System, *tiger*, the Topologically Integrated Geographically Encoded and Referenced, *chs*, the Connecticut Historical Society's Connecticut Place-names and a *local* thesaurus in the delimiter 2 of the 651 field. The *gnis* includes all of the words on the USGS topographic map series and is in a standard format. It is available online from the US Geological Survey http://mapping.usgs.gov/www/gnis/gnisform.html and from the "Getty Thesaurus of Geographic Names" http://shiva.pub.getty.edu/tgn_browser/. The *chs* is a scholarly, comprehensive study of historical place names, it is in print format only, but will be scanned and entered into Connecticut Digital Gazetteer. The *tiger* thesaurus is a database of street name and auto address location. The Official TIGER look-up site is http://www.census.gov/cgi-bin/gazetteer and MapQuest, a value-added site is at http://www.mapquest.com/. Items in the *local* thesaurus are compiled by the catalogers and added to the Connecticut Digital Gazetteer as needed.

Mapping the CHO database

At present the CHO database numbers in excess of 4,500 records. These records list over 6,500 instances of place names. There seemed to be two methods for providing spatial access to the CHO Online Public Access Catalog (OPAC). One, an 'ambiguous search' would search for place-name strings against the 651 of the OPAC. This method might enable the user to search for the place-name 'Mansfield' and all of the named features in 'Mansfield'. This method was determined to be inefficient. The other method, a 'specific search' provided for pre-processing the names in the 651 field. The 6,750± instances of names represent only 627 different names. For example, there are close to 500 instances of the place-name 'Hartford.' By structuring a specific search for Hartford and more efficient use of the Connecticut Digital Gazetteer, the OPAC and the HTML interface is possible.

An SQL process is performed on the CHO database in the Endeavor system. The query process pulls each instance of a 651 field and the 653 field. The 653 field describes a category; Diversity, Infrastructure, Environment, Lifestyle, and Livelihood designated by the selector under the design of the grant. After the initial SQL process that extracts the place-names from the CHO database as a table, a series of processes are performed. First, a table is created for each category. Second, a table for each thesaurus is created for each category. Third, each instance of a place-name is counted and the count entered in a field. Finally a URL is constructed from the place-name and the category as a 'scripted search.' These tables are then geo-referenced using ArcView; the *gnis*, *local* and the *chs* against the Connecticut Digital Gazetteer, the *tiger* against the TIGER Street file. These coverages are then referenced through an ArcIMS project.

Accessing CHO through a Spatial Interface

We are using ArcIMS on an NT server to link to the CHO OPAC. When the user determines their geographic choice, a 'scripted' query is sent to the OPAC. The script is in the form http://cho.uconn.edu/cgi-bin/Pwebrecon.cgi?DB=local&SAB1=hartford&BOOL1=any+of+these&FLD1=Place+Name+%28651A%29&GRP1=NOT+with+next+set&SAB2=east+hartford&BOOL2=as+a+phrase&FLD2=Place+Name+%28651A%29&GRP2=NOT+with+next+set&SAB3=west+hartford&BOOL3=as+a+phrase&FLD3=Place+Name+%28651A%29&GRP3=AND+with+next+set&SAB4=diversity&BOOL4=any+of+these&FLD4=Category+%28653A%29&CNT=25&HIST=1. This is a particularly difficult example. It indicates the complications of compound place-names like 'Hartford,' 'East Hartford,' and West Hartford.' This search is for 'Hartford' only. The ArcIMS server is a simple search engine with few tools. It is primarily a cartographic interface, not a GIS application.

The Metadata Framework

The quality, consistency, and of course, the very presence of geographic coding within any given metadata are key variables for the retrieval of relevant data when using a digital cartographic interface to query a database or multiple databases. For example, the MARC21 map format contains several 'mappable' or geographic elements such as the coded cartographical mathemathical data in the 034 field. This field holds the geographic coordinates that define the limits of the map being described. However, there are also other fields that can be mapped. These include the 052 geographic classification code and the 651 subject added entry--geographic name fields. Also, beyond the MARC21 maps format, other subject added entries within the cataloging records for other formats often have geographic coding when they have geographic subdivisions assigned. This raises the possibility of being able to reference this data using a digital cartographic interface as well. In other words, a web based map search interface could potentially serve as a portal to large amounts of geographically coded data including bibliographic data.

The metadata created for the Connecticut History Online project is an example of geographically coded data that may be queried from both an online catalog or from a map interface. The catalogers for the project used Endeavor's *Imageserver* software to input metadata for each image within the MARC21 format. Within each metadata record, there is at least one 651 subject added entry. The following thesauri are being used to determine the subject added entries: gnis, tiger, chs, ipc, lcsh, local.

In the recent past, only a few non-graphical interfaces exploit the geographic coding of metadata for searching databases. *GEODEX* and now Endeavor *Voyager's* "Geospatial Search" option. While Endeavor's *Voyager* has a "Geospatial Search" it requires the latitude/longitude of the query point and only searches material cataloged in the MARC21 Maps format, using the 034 field… correctly. Though Endeavor's intentions seem reasonable, few of us, much less your typical undergraduate user, know the Lat/Long point of anywhere. The first step in using these tools is the consultation of a paper gazetteer.

One challenge is maintaining a high percentage of relevant hits within the query results while attempting to expand the comprehensiveness of the search.

The problem has been the underlying cartographic database that represents the geometry of the place and the interface.

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[i] Mapping Science Committee. http://www4.nas.edu/cger/besr.nsf/web/mapping_science?OpenDocument

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[ix] ADL Gazetteer Relational Database Schema , http://alexandria.sdc.ucsb.edu/~zheng/alex-imp/new_gaz/, 1999

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[xi] apache XML parser, http://xml.apache.org/, 1999

[xii] Connecticut History Online. http://www.lib.uconn.edu/cho/index.htm

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Meeting Number: 166
Simultaneous Interpretation: -

Geolibraries, the Global Spatial Data Infrastructure and Digital Earth: a time for map librarians to reflect upon the Moonshot

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Much has been written about the concept of "geolibraries" from different perspectives (Goodchild, 1998, 1999, 2000; Onsrud, 1995; Buttenfield, 1998; Boxall 1998; 1999) but little has been done to actually make the case for *libraries*. This may be due, in part, to the reality that geolibraries are defined in a digital-only context. This brings us once again to the issue of how metaphors become critical, not only to our understanding of the infrastructures we attempt to build, but to the ways in which we try to link the new concepts and structures with the old. Libraries are thought of in certain ways, especially by those who use libraries but do not work in or research about libraries. One must be careful not to overstate the case that most of the research and development surrounding SDI's (including geolibraries) is being carried out by colleagues outside of the library community. This has both positive and negative effects.

On the positive side, such activity provides for potential collaboration and a new type of shared experience. From the library point of view, geographers and GI scientists who research and work on geolibraries (in all their permutations, such as digital earth) can become allies in an effort to increase access, use and preservation of cartographic materials and geospatial information. But there remains a problem area in that the ideals and beliefs held by librarians (curators and archivists as well) are not shared by geographers and GI scientists (the reverse may also be more than true). They can be shared. They have the potential to be common beliefs. However, they are not normally connected because of the differing histories of disciplines and the manner in which librarians carry out their professional and academic lives. Simply put, the emphasis in the library is on service, while the emphasis in the academic community is on research. Both communities share the roles of teaching, but even there resides a potential conflict. Librarians have for some time fought the intellectual battle of trying to convince academic colleagues that they too are teachers on campus. Sadly, this author has had the negative (thankfully infrequent) experience of being called a "good helper". This does not bode well for future efforts.

Those who have written about geolibraries, as well as associated issues that have always been the domain of libraries (such as access to information, archiving and preservation, and collection development), have tended to either over simplify library issues or have focused too much on the engineering and computational aspects of geolibraries. Interestingly, most people involved in GIS have assumed that metadata issues (and other standards processes related to information description) are new and unique, or even highly technical in nature. The work of ISO TC 211 and other such standards bodies, tends to involve more non-librarians. Again, this is not to detract from the positive outcomes of that work, but librarians, following the discussions on the margins, laugh among each other because they say "gee, didn't we do that a decade or two ago?".

Librarians tend to talk with, to and among librarians. Even in the broadest communal definition of librarianship and libraries, there exist divisions; such as those between librarians and curators, or archivists. So divisions and overlap between GIS and libraries should not be viewed as so odd. Why all the fuss? Simply put, there is no need to duplicate effort. Librarians can contribute to geography, and geographers to librarianship. We have common goals and experiences, and we share a common language – the spatial.

Key to this argument, of course, is the idea that map and GIS librarians are specialists among specialists, and so working collegially with other specialists in the discipline of geography makes perfect sense.

Geolibraries do provide an excellent and unique opportunity to elevate the work of both GI scientists and librarians. And there are connections to be made between geographers and GI scientists, and geographers and librarians. One thing is becoming clear, the overlap is increasing. Map libraries are becoming geospatial information centres, providing access and services; teaching and value added creation/manipulation. The level of service varies from campus to campus (speaking from the academic library, but some public libraries – especially in the US – do more than most). Everyone seems to be talking about access to information without ever thinking or mentioning libraries as being the critical juncture. This is more ironic and troubling because the concept of the library is embedded in 'geolibraries'. Goodchild defines the idea of "geolibrary" as a "library filled with georeferenced information" which is based upon the notion that information can have a geographic 'footprint' (Goodchild, 1998). He also explains that the GIS community has being working with geographic information, while georeferenced information is broader in scope to include such things as photopgraphs, videos, music and literature that can be given a locational variable which defines a footprint. In this way, the idea of the geolibrary immediately extends well beyond the traditional scope of map libraries and archives to include almost all information contained with libraries; he later mentions that it can include information outside of libraries as well. This is the theoretical basis for what we now view as geolibraires. Geolibraries are now seen as components of digital libraries, in large part due to funding of the Alexandria project which Goodchild directed. In practice however, many geolibraries are being developed based upon more limited definitions of what should be included in their "collections".

The most obvious feature of geolibaries, as is true for digital libraries, is the focus on digital information and metadata, as well as the distributed nature of the libraries and 'collections'. But they do not just include technology and information. Later, Buttenfield (1998) makes the statement that "We could (and should) discuss the technological and cognitive impediments of fully operational geolibraries. It is equally important to consider the institutional, societal, and economic issues, which have not been adequately addressed in current digital library efforts."

> Distributed geolibraries provide a useful framework for discussion of the issues of dissemination associated with the NSDI. The vision is readily extendible to a global context. (Finding # 5, Distributed Geolibraries Workshop, Mapping Science Committee, 1999).

Mike Goodchild, during his keynote at the ICA conference in Ottawa in 1999, stated that what is needed, or how we can view Digital Earth, is as a "moonshot" (Goodchild, 2000). There are others things that Goodchild et al stated which are useful and instructive to review in connection to many issues faced by map librarians who seek to become part of a move towards a 'global geolibrary infrastructure'. Many of the issues touched upon have been explored previously (Boxall, 1998; 1999; 2000), but the changes occurring in many infrastructure activities means that it is still useful to review and revamp some of the suggestions for action and reflection. Above all else, any discussion of "Digital Earth" (DE), the "Global Spatial Data Infrastructure" (GSDI), and "Distributed Geolibraries" should be framed around the broadest definitions of information and infrastructures; namely to include and focus upon the people, technology and organisations which give rise to and sustain such things.

This paper begins with an answer. At the Association of Canadian Map Libraries and Archives annual meeting in Montreal (June, 2001), I made a presentation along similar topics. During that presentation I stated that the fundamental missing piece in all this "talk" about sub-sections of the Global Information Infrastructure (GII) – GSDI being but one piece of the GII - was the lack of a "culture of permanence" which results from the alternative culture of the Internet. We have developed "near ideologies" that promote networks over people. My answer is a shift in dialogue based upon the principle that we should be funding "institutions and intellect" instead of "infrastructure and internet". This view has been called neo-luddite and reactionary. Actually, the phrase is borrowed from e-commerce, with an alteration. We hear now that total online commerce does not work well, and so we see the rise of a 'clicks and mortars' concept. I suggest that sustainable (over 100 years) Internet-based infrastructures require the type of clicks and mortar that gave rise to the greatest libraries and archives ever seen. Digital Earth is wonderful, and technically feasible, given enough resources. I want to see it happen. However, I think we have enough time to take a closer look at some of the bigger issues before we launch our moonshot – or before the vision is extended too globally.

The matters for concern are not so 'neo-luddite' after all, for even some of the strongest proponents have raised questions about some very difficult and outstanding issues. For example Goodchild mentions the connection or co-existence of two basic trends – the increasing popularity in "things geographic" and the "digital transition". From that he suggests we face a basic "paradox" in that "there is an increasing maginalization of cartography and an increasing need for good cartographic practice." I would like to borrow that phrase for a second and suggest we put in other terms in the place of cartography, such as "libraries", "archives", "education", "teachers and teaching" and "geography". And I am reminded of the fact that Kofi Annan, Secretary General of the United Nations, addressed the AAG meeting this past March, in order to remind geographers of their critical value to the greater global good. Geography is mainstream again, if it wants to be, and so also may be libraries.

And yet it is curious that most everything about DE and GSDI is written by non-librarians. Even the recently released CookBook for GSDI (www.gsdi.org) makes almost no mention of libraries, and even any mention is quaint. Perhaps it is due to the lack of involvement by librarians in GSDI? This should not be surprising when one considers that some of the great thinkers and "gurus" of this high-tech era give little attention to libraries. For example, a librarian would think that a text called the "Age of Access", dealing with information access issues, would mention libraries more than once, in one paragraph (see Rifkin, 2000, p.87). Librarians are not at the forefront of these debates. Ironic isn't it? This is the age of information, a knowledge based economy, and those most concerned with information and knowledge seem to be on the margins. This relates back again to what Goodchild stated in 1999 about the marginalization of certain professions at the same time when they are more needed. I'll return to the issue of the "moonshot" later.

James J. Duderstadt, in Educause Jan/Feb 2001, talked about the coming GII when he said:

> We are on the threshold of a revolution that is making the world's accumulated information and knowledge accessible to individuals everywhere, a technology that will link us together in new communities never before possible or even imaginable (p.56).

This view is underlined by Borgman (2000) although the later author takes a more academic and critical view of all sides of the issue. Both authors do, however, highlight the reality that is seen in writings about geolibraries and digital earth – in fact it is seen in the process towards such things as the integration of standards at ISO. That reality is, simply put, that we are well on our way to developing the most widely used, available, fastest, and most complex (yet intuitive) communications and information distribution system ever, with an enormous amount of internationally agreed to *technical* interoperability. Notice I did not say it would be universally available or available to all equally, and I specifically place it in a technical context. This, I fear, will also be the same period of time when the division between peoples will become even greater as a result of have and have-not scenarios becoming more entrenched. The digital divide will, even under digital earth, grow! This does not mean to suggest that we should ignore progress or fail to advance technology. We can still have a moonshot, but we need to learn from our past moonshots and so-called 'revolutions'. We need to see that one technology or one revolution cannot be the saviour of us all. It can and will help, and it will also hurt too! Let us move well beyond the hype and the focus on the engineering and computational wonders.

This author would also add that libraries will always exist, and furthermore that libraries have never been more important. But this importance rests on what libraries do, and not on what they are perceived as doing. Libraries are more than storehouses (much more than 'clearinghouses'). We do more than collect and catalog. Librarians are active participants in the learning process. We are part of a great process of "change".

> In considering possible institutional arrangements for distributed geolibraries, we begin with the assumption that libraries are social institutions that will continue to change but will not be made obsolete by the advent of electronic publishing. Indeed, distributed geolibraries and digital libraries in general will complement the traditional activities of libraries and related institutions. Libraries respond to many complex societal needs. They are used for research, teaching, self-learning, and entertainment. They serve as social and activity centers for many communities, whether these be small towns, neighborhoods, or institutions. (Mapping Science Committee, 1999)

The 1998 workshops hosted by the Mapping Science Committee (under the National Academies in the US) to discuss the ideas of 'Distributed Geolibraries' was one of the few occasions where some of the best and brightest in the fields related to geoinformation (including librarians) were able to meet and review issues and possible developments. Out of that workshop came one of the few substantive reviews and presentations of geolibraries and their potential relationships to other geospatial information infrastructures. In addition to the above quotation, below are some of the more salient points raised that have a bearing on this discussion, The entire report, published and available for purchase, is also distributed by the National Academies Press via the world wide web. The report as a whole is very detailed and covers many of the issues that needed to be addressed at the time it was written (1999). However, the US-centric view in the text needs to be addressed soon if any progress is expected at an international scale. Thankfully, even the authors of the report identify this issue:

> The workshop participants were almost entirely from the United States, and this report necessarily adopts a U.S. perspective. Nevertheless it is hoped that it will be read by non-U.S. researchers and developers interested in distributed geolibraries and that it will help to achieve a greater degree of convergence in research and development at the international level (Mapping Science Committee, 1999).

Therefore, much of this essay deals with and uses examples of issues being faced outside of the digital earth "home". And although many international efforts are not thoroughly discussed, it is recognized that such things as the "Global Mapping Project" and GSDI do take into account significant barriers to access and use from an international perspective.

In 1997, the Association of Research Libraries –ARL - (Washington, D.C.) published a special issue of "Transforming Libraries" titled *Issues and Innovations in Geographic Information Systems (*ARL, 1997). While this exploration of case studies from ARL and non-ARL libraries in the US and Canada highlighted trends and services being provided within libraries, it failed to grapple with the more serious issues associated with GIS in libraries; it did mention issues, but in 1997 the move to implement GIS in libraries was still new enough that serious problems had yet to be addressed, sometimes not even recognized. However, what is most instructive is the statement regarding the value of traditional library roles:

> Though they are using GIS, libraries rarely focus on the technology itself. Sometimes there is a brief infatuation with the technology, but soon a realization sets in: though the technology is new, traditional skills of librarianship are required to use it effectively. User needs must be evaluated; data must be selected, cataloged and prepared for users; public services must be designed, offered, and managed.

The paper goes on to include a description and summary of interviews with Larry Carver and Mary Larsgaard from the University of California-Santa Barbara project for the Alexandria Digital Geospatial Library. In that section, Carver and Larsgaard make the excellent point that we have to remember that all the focus on the technology has to be geared to the basic notion of user needs which continues to be the key element of reference services in libraries.

Since the time of the ARL report, and during the whole phase of implementing GIS services within libraries, much has been written about the development of particular aspects of such services, as well as the broader issues associated with geospatial information (see: Cline and Adler, 1995; Cobb, 1995; and Smits, 1999). Also we have seen many developments associated with map library associations and calls for further cooperation, both in and outside the map library community (Boxall, 2000; Wood, 1988). But libraries and archives, especially those that work with cartographic materials and geospatial information, are more than just storehouses of media in a variety of forms; we are active learning places and long standing contributors to the economic and social vibrancy of our communities (see Hawkins, 1998).

Now that the hype and fear surrounding Y2K has passed on into the eternal ether graveyard, it should not be surprising that we find, as the dust has settled, new opportunities to really begin to find ways to extend the valuable uses of computing and telecommunications in all aspects of our work and lives. Libraries and life are being transformed by such revolutionary *and* evolutionary changes. Sadly, however, this is a time when we face a double-edged sword, or as my grandmother always warned me: be careful of what you wish for young man.

I will not argue that such change has no place. Nor does this discussion assume that the efforts by others to create more, and faster, access to geospatial information is headed in the wrong direction. On the contrary, and even beyond the hype from within our own communities, there really are great opportunities to do better things with some of the technology and data becoming available; future modelling and dissemination methods may even extend such benefits. This paper does assume that the concepts (or metaphors) of 'geolibraries', 'digital earth' and ' spatial infrastructures' do provide the best means to get what we have always wished for, but we also must (and immediately) become more clear about the goals we wish to pursue and the problems we must overcome if we wish for our desires to be met in a sustainable, equitable and wise manner.

Frank Webster among others asks us to question what an information society is and why we continue to refer to this as an information age ("why not a computing age?") (see: Webster, 1991). How did information become some so sacred? Pehaps we need to accept the potential reality of libraries becoming extinct in order to focus on what libraries have been, are, and should become within Digital Earth. Even in the 'Distributed Geolibraries' text from the Mapping Science Committee we are presented with the blunt potential reality that…

> It is possible that libraries will be the principal means whereby citizens gain access to the services of the distributed geolibraries of the future; it is also possible that libraries *will play no significant part* in that process" (Mapping Science Committee, 1999; emphasis added).

There is time, and then there is "Internet time". Everywhere we read that the Internet has broken the stranglehold of geography; distance and time no longer matter when communications and information access can take place anytime and anywhere. However, herein Internet Time is defined as a psychological and social phenomena. It is visible in several ways, most notably the way in which "recent" ideas seem very old due to technological changes. This also relates to infrastructure issues. For example, we often have heard that the new spatial data infrastructures are being developed along similar lines as previous major transportation systems. Instead of transporting products and people via trains planes and automobiles, we are transporting ideas and information across communications networks. Ones can take hours, days, even months; the other seconds and minutes and maybe even hours. The development of past infrastructures for the transport of 'things' took decades, and is still going on today. The planning process was long and arduous. If we do not take a similar "long view" of the infrastructures of today, perhaps we may see a breakdown in the infrastructure along similar lines as we see with roads and water?

We also hear about the digital divide. This is not new. There has been for some time now (centuries or more) a real divide between "worlds" - developing and developed. Some may argue that a 'western bias' suggests the developed world is right or on the right course and should be followed. Most development theories have tried to show this as steps towards progress - an almost natural evolution of nations and peoples. Now we are being presented with a new dimension to the already existing divides - a digital divide. And here is where Internet time and infrastructure issues really become problematic. Previous infrastructures have been built around the idea of a greater public good, regardless of how much private sector involvement occurred to build the actual physical infrastructure. This, however, often led to monopolies that have been, for the most part, broken (think of phone companies). Unless a campus has a large infusion of capital to build a new fully wired and integrated digital "building", one will find that the digital infrastructure looks like a patch work of wires and screens almost thrown out into the first available space. It is as if we fear not having something, so we rush to add it no matter what the longer impact. This is one inherent problem with framing our views around legacy concepts such as infrastructures, as well as focusing on the engineering and computational facets more than the society inequities and impacts.

This is not a nostalgic trip down some false memory path suggesting in any way a return to the good old days - they don't exist. Then again, do the good new days exist? It is the *speed of change*, the Internet time equation, that is most disconcerting in relation to the building of these infrastructures (note: remember, infrastructures here include our notions of DE, GSDI and Geolibraries). The public "web" hit the market in 1990 (and then between 1990 and 1994 the WWW consortium was formed). Early 1993 NSCA released Mosaic (see: http://www.w3.org/People/Berners-Lee/ShortHistory.html). Now try finding an advertisement without a "www" address. Some companies now only list their web site for finding information. Try the same experiment in China or Angola. We have seen similar speedy adoption of technology, along with the usual changes in formats that drive us all batty. What came before VHS? What will come after DVD? Ten years of Internet Time is too short a time to bet the future of life and work and discourse and culture.

What does all this have to do with map libraries, digital earth and SDI's? Perhaps nothing. Perhaps everything. If the Internet (the web, because only the web metaphor seems to be surviving) is only ten years old, at least from a public access point of view (even then, the reality may be that it is only five years old) then this "technology" and "infrastructure" is truly amazing and wonderful. It is consuming all of our work and discourse in ways that previous technologies have not. Perhaps that is over stating the case, but the research literature and publications in more popular press (and lists) seem to be telling us that the speed of change will only increase. Again, the 'Distributed Geolibraries" text offers a glimpse of this:

> At the same time there are potential disadvantages to use of the WWW as a mechanism for storing and disseminating geoinformation that will have to be addressed. Little of the information now available via the WWW has been subjected to the mechanisms that ensure quality in traditional publication and library acquisition: peer review, editing, and proofreading. There are no WWW equivalents of the library's collection specialists who monitor library content. But it is easy to be misled into believing that quality control problems of the WWW and distributed geolibraries are somehow different from conventional ones. Users of distributed geolibraries will tend to trust data that come from reputable institutions, with documented assurances of quality, and to mistrust data of uncertain origins, just as they do today.

The above is starting to get at some of the real critical questions, or better yet 'traditions' that seem to be evaded by some of those trying to build and gain support for certain infrastructures like DE and GSDI. There are traditions in libraries *and* archives which are as important – more so! – and should be borrowed/lent to the new infrastructures.

Libraries are, in one sense, part of the infrastructure of learning, discourse and democracy. Libraries and archives preserve and promote our heritage and culture. They are part of the communication process. They also require levels of redundancy and preservation not normally seen as valuable in a "delete and overwrite" culture which permeates the 'net'. We also hold values such as privacy, public access, neutrality, confidentiality, freedom of expression, and equality to be critical to the very nature of our work and lives. Put another way, again quoting from the "Distributed Geolibraries" workshop:

> Whereas the substantive content and focus of geographic infrastructure building have focused on data and information (e.g., the NSDI), the substantive content of traditional libraries has focused on collections of knowledge and to a lesser extent collections of information.

Jankowska and Jankowski (2000) suggest that part of the driving force behind geolibrary developments is the changing nature of the global economy and the demand for "fast and easy access to information" (p.4). They go on to state that the digital changes in libraries allow us to move beyond traditional roles and services, but ask if we will be able to fulfil our role in the digital period era (p.5). This raises a related matter that has to be with a time lag between policy and practice. Whether or not we can adapt and change to meet new roles will somewhat depend upon broader changes in the policy realm (such as with pricing of government geoinformation, a concept not fully appreciated except outside the US). Imagine if, for example, a geoinformation infrastructure was built around the idea of "mapster". Would we see similar reactions as 'Napster' received? I would also argue that some changes just taking hold are about to alter what we do and how we plan for what we do in very substantive ways; especially the coming impact of GML.

Within all these discussions and developments is the more interesting question of how we attach metaphors to what we are doing. Recall for example the hype that surrounded the "information highway". What I find curious is that metaphors are short lived; I cannot recall the last time I heard or read "information highway". Not only do we have a short technological life cycle, akin to the inverse of Moores law, but we have short life cycles with metaphors associated with the technological revolution. Why is the idea of metaphor critical? Goodchild (2000) suggested that the DE and GSDI, and Moonshot, are metaphors. I am not trying to, on purpose, be post-modern and deconstruct all these terms and concepts, nor am I trying to delve into the ontology or epistemology of these objects and ideas, but if you like that sort of thing, then enjoy.

> The metaphor of the library is powerful because it immediately suggests a number of important issues. For example, one way to think of a library is as a storehouse of the intellectual works of society, and millions of people from all walks of life have contributed works to our current library system. Can we expect to see a similar diversity of contributors in the distributed geolibraries of our future? However, the metaphor of the library should not be taken too far, and not all aspects of the operation of a library will be useful in envisioning distributed geolibraries. Many of these will be generic and of no specific relevance to the geoinformation that is the focus of distributed geolibraries ..... For example, it is assumed that distributed geolibraries will need to address issues of archiving and preservation (particularly serious issues given the rate of technological change in the digital world), but these are generic to all libraries and are not discussed at length in this report (Mapping Science Committee, 1999).

I would suggest that archiving geospatial information, mentioned above, within the context of geolibraries and/or digital earth will be "killer app".

The Mapping Science Committee report also raises issue associated with policy. However, we should be reminded that this comes from a US based view, and the policy realm outside the US is anything but uniform or stable (see especially, MADAME 2000).

> The policy challenges presented by distributed geolibraries include the following:
>
> What are the legal, ethical, and political issues involved in creating distributed geolibraries? What problems must be addressed in the area of intellectual property rights? How will these issues affect the technical development of distributed geolibraries?
>
> Who will pay for the creation and maintenance of distributed geolibraries? What components might be in the public domain versus those provided by the commercial sector? ***http://www.nap.edu/html/geolibraries/ch3.html***

The recently released "Canadian Geospatial Data Policy Study" (authored by KPMG Consulting, and funded by GeoConnections) makes some key recommendations that could have the effect, if implemented correctly and as promptly as possible, of making more geospatial information available within the public domain. One interesting point is that the study makes note of the oft quoted 1:4 ratio of economic impact generated by public release of geospatial data. This ratio is now being both questioned and discounted as "bunk". Ironically, the ration comes from a report for the Australian SDI authored by, you guessed it, KPMG (see: www.geoconnections.org for the Executive Summary). And from another vanatage point, namely Europe, we find the development of spatial information infrastructures fraught with policy barriers (see MADAME, 2000).

Can there be compromise? Is there a middle ground in cost recovery/pricing/licensing and crown copyright issues? "Branding" as opposed to copyright? Crown copyright is currently used as an

enforcement mechanism to protect revenue streams, and to impose the concept of Government IP. Certainly, all data users value the quality of data sources. We can and should comment on data quality. Canada is very fortunate to have federal agencies and institutions that produce some extremely useful and high quality data sets, not to mention "information" in general. In terms of geospatial information (over time), governments have been and continue to be the single largest producer and collector.
There may not be one "solution" that can meet all users and all requirements. However, this is not problematic because there is already a very complex situation in place. Any improvement is just that, an improvement, not matter how incremental. Also, the idea , or misconception, that the policies and implementations (agreements) in other jurisdictions like the US, Australia, or the EC, are standard and easy to implement across all communities and contingencies is wrong. There are rules, and there are always exceptions. However, the general tone of the KPMG study is one of creating a more open transmittal of data within the context of the "public good". The public good is most difficult to nail down, and it is extremely dependent upon which side of the "public fence" one resides. However, from the point of view of all parties and sides of the debate, educational uses are seen as one clear area where improvements are both easy and justifiable. Another area is the government-to-government transmittal of data.

Previously, I argued that the critical issues facing map librarianship are demographics, technology, policy and organisation (Boxall, 1999). First, in looking at demographic issues we must recognize that there have been no recent studies directly related to map librarianship, so it is necessary to infer from more general trends the possible implications for the profession. There is no doubt that, like other professions in the 'educational' sector, we are facing an aging workforce. We have seen over the last few years numerous advertisements for map and/or GIS librarianship positions that have been difficult to fill. This is not due to a lack of interested people, or persons with adequate training or experience, as much as it is due to the simple fact that the total pool of persons being trained in fields associated with map librarianship (including library and archival studies) is being courted by more lucrative employment and career opportunities. We have all come to this profession via numerous routes - and some of us are not 'librarians' but are curators or archivists or, to show how things can change, GIS Librarians. However, we must recognize that the competitive job market is having an impact.

There is another feature of demographics that we must consider. We need to be concerned and aware of the changing demographics of our clientele. This is critical when considering new types of services, or in revamping existing services and programs within our institutions. For example, we find many universities larger numbers of students drawn from non-resident populations or from groups who have, historically, been marginalized from higher education. Such groups include students whose first language is not English or students with learning disabilities. We also see trends towards more mature, continuing and distance education students. These new mosaics of students and clientele mean adapting services and collection policies to meet the needs of these clients. Add into this mix the obvious growth in the overall numbers of persons using cartographic and geographic information (in all forms) as a result of increased access to and use of digital technologies and the Internet (ie: web based mapping), and suddenly we can predict increased pressures on our resources, institutions and ourselves in the effort to meet service needs. And let us not forget, the vast majority of youth are regular users of the Internet and computing technology and their expectations for digital work and access to information are significantly different from the norm (Weil, 1999). I was recently reminded of this when my 16 month old niece showed me how to use the remote control for the TV. The generation unborn will be the one, in two to three decades, that will have expectations we have yet to even dream in Digital Earth speeches. Two to three decades in internet time is a millennium!

And what of training and professional development? Because of changes in GIS and cartography (not to mention other disciplines!), we need to make sure that our skills are up to the task. However, there is also an opportunity to become allied with a broader call for more solid educational opportunities for GIS and cartography students and practitioners to learn from each other (Fisher, 1998). In this way, we may begin to realize that we are part of the cartographic visualization process, rather than being the 'keepers' of the output from that process (Kraak, 1998). It is not simply a matter of digital technology changing the nature of work that is of concern to our communities. In fact, digital technologies are merely the physical manifestation of changes in the culture of work. There has been a shift from the notions of public service to public entrepreneurial service. In all these professional qualification issues we need to become more aware of, and more heard among, our colleagues in related disciplines.

It is almost common knowledge that faculty, librarians, teachers, and a number of other professions are facing massive turnover in staff over the next decade. Demographers have been aware of this fact since the 1960's and 1970s when massive employment occurred in these fields. Every campus administration is trying to come to grips with the issues of faculty hiring and retention. This is true for librarians, and especially so for librarians in specialized areas such as maps, geography and GIS librarianship. 'Map Librarians" are specialists among specialists. The introduction of GIS in libraries (or is that through libraries?) has made it such that new hirings and job postings require multiple qualifications in the areas of traditional librarianship (normally attributed to the MLS) as well as a host of experiences, qualifications and training in GIS and related technologies. The demand outstrips supply (as anyone who has seen re-postings can recognize). The real issue, in relation to the development of digital earth, is where the librarians will come from in order to help shape the geolibrary component of DE (or as I like to think of it, 'who will clean up the mess').

In Canada there has been a broader study of the human resource issues jointly funded by the Geomatics Industry Association of Canada and the Canadian Institute of Geomatics, and the Canadian Association of Land Surveyors. This study on human resources (called the HAL study because of the consultants acronym) suggests that the demand from government and industry for highly qualified GIScientists and technicians will continue to grow. It also highlights the need for more training programs and new methods of delivery for professional and mid-career training. Perhaps, as was sometimes the case in the past, more GIS librarians will come from this process. Ideally, we would see many geographers take up the challenge and re-focus careers within libraries. However, libraries don't pay as well as faculty or industry positions. Which again brings up funding issues. Even Goodchild (1998) suggests that libraries are facing a difficult present and future, even without adding in human resource questions:

> At this point in history, libraries are faced with apparently insurmountable problems (Hawkins, 1996). The published corpus of humanity is growing rapidly, and doubling in not much more than ten years. Journal prices continue to rise at well above the rate of inflation. Library budgets are contracting, and libraries are faced with unprecedented problems of security. The pressures to find new approaches, and to take advantage of new technologies, are high.

At the recent Canadian Association of Geographers meeting in Montreal (June 2nd, 2001) the author made a presentation (which will be published in a forthcoming Canadian Geographer special issue on GIS) where he stated that standards are dead, but standards are more vital than ever. The developments related to XML and GML, and ISO standards related to metadata and technical issues (coming from ISO TC 211 and that committee's working groups) are merging with other developments such as the FGDC content standards and MARC21; not to mention such hybrids as Dublin Core. There is no shortage of standards in the geospatial and library communities. What is most interesting to note however is that there is a trend towards a standard with some room for local variations (to deal with such issues as pricing/access restrictions, and language).

With the Open GIS Consortium (OGC) in full-speed-ahead mode, there is little doubt that questions related to standards and interoperability are at the fore and will remain there for some time. So in that sense, standards have won the day; they are vital and critical to the continued progression towards DE and the GSDI. But standards are not the issue we should be focused on as much as we are, even though they require some degree of greater input and advice from the library community (how many librarians are on ISO TC 211 working groups?). The potential ability to find geospatial information from distributed geolibraries is great; metadata standards will work, so long as we pick one and stick to it. The real question is: who will generate, check, load, monitor, update, and verify the metadata? Who will preserve it? Libraries can do this, but in conjunction with the other demands for services and the budgetary crises, there will be a serious backlog. Even if we can utilize consortial arrangements like OCLC or working with our individual national library networks, we will still find many serious gaps in the metadata. It is easy to contemplate the lifecycle of metadata for such items as the Digital Chart of the World, or even national topographic series from various nations.

But the above ignores the real potential in accessing geospatial information – the potential to aggregate from the local to the global – the true meaning of DE. Some libraries, mostly in the US, are developing excellent collections of data resources and metadata storehouses for local data (state as well). But DE is more than the US collections. If standards are there and (basically) agreed to, then how will we organize the collection and access of the data? Is there an agreement among the map libraries and geospatial information providers to maintain metadata (beyond some well know local cases)? Perhaps one action (to be taken immediately) would be to have the library community represented within the DE and GSDI community to develop reasonable processes to deal with the long term viability of metadata collections. Libraries and archives have a unique perspective that is not normally present in the DE and GSDI community – the long view! We deal in decades and centuries (perhaps longer). The culture of the digital geospatial community is one based upon the computing and engineering view, which tends to hold that one can re-create anything quickly, delete, overwrite, and download. This is short sighted at best. It is not to suggest that the deeds or views of those in DE and GSDI are bad, wrong, or nefarious. Rather, this is simply an expression of two cultures coming together and learning about each other. Libraries have the views of openness, neutraility, reducancy, sharing, and others, that help make sure the collections we build have some *context and lasting nature*. These views have a place within DE and GSDI, as well as within other local efforts.

Where are the data, really? Perhaps the best statement to make regarding what issues have to be overcome to have a better geolibrary network is that, in Canada, 60% of the country is mapped using 20 year old information at the 1:50,000 scale. Also, when we look at international access to local data (such as cadastral information) we find that the barriers to access and use are even greater. Not all US federal information is as easy to obtain as one would think, and the NSDI "system" is still not seamless – it is good, and it is getting closer every day. When we add in local data needs to make digital earth a reality, as well as more 'grey literature' and other non-georeferenced information, then we find the reality of digital earth is a long way off. Or is it? Perhaps efforts at new organisational structures for geospatial information will work (such as the GeoData Alliances)? Perhaps we are merely at the very beginning rather than the middle of the process? If we return to the notion of Internet time, what can we expect in ten years in terms of policy and data access? I would argue that for geolibraries to be truly effective, and for digital earth to really meet it's moonshot goal, then local data has to become the vast majority of the holdings and collections. Digital earth is going to become the ultimate metaphor for "think global, act local".

Kate Beard (1995) stated that "Engineers and librarians are two groups that one does not associate as having collaborative interests" and recognized that "fringe areas of library science" are the map librarians, and for engineering are those in spatial information engineering". From this the workshop on distributed libraries organized the meetings to
"frame the discussion by reference to the functions, services, and institutional arrangements of the library, for two major reasons: first, to engage the library community, with its long experience in providing access to information, in the development of a vision for a new kind of library and, second, to provide a familiar and concrete starting point for the discussion" (Mapping Science Committee, 1999).

Boston et al (1998) suggest that in developing new GIS-related services, it is both critical to include internal institutional or agency departments as well as a multitude of external partners who can provide support, guidance and become integral collaborators for creating new products and services. We must begin to recognise that we, under whatever banner or name, are within a specialized group. We are in essence a policy network (Coleman and Skogstad, 1990). In this case, policy does not simply refer to the creation of 'policies', but to the broader notion of socio-political associations that seek common goals – networks as communities. I would also suggest that we are part of an emerging network that has a foundation in the best of cartography, geography and librarianship. It does not mean that existing organisations or associations lose their identity. Cartographic societies remain 'cartographic', while map library associations remain 'library' associations. But we must be honest and recognize that we have too many associations and societies that are carrying out the same functions. Conversely, *because* of our small size and collegiality, we should be in a better position than most to cooperate and find new, effective means to enhance and sustain our community and our work.

Rosenblatt, S. (1999) clearly states that we "must develop new expertise and build strategic alliances and collaborative relationships with complimentary partners inside and outside" our institutions (p.45). We are facing tremendous technological change which requires inputs of money, time and energy; policy issues related to the access and use of geospatial information in all its forms requires high-level and substantial political efforts; and organisationally, we need to remove duplication of effort and find ways to coordinate actions, services, training, communication, public and political awareness and research and teaching (ie: providing the services we love!). As the move towards a Global Geospatial Data Infrastructure gains acceptance and support, our community of librarians and curators and archivists needs to be well positioned to work within that structure *and* affect its development. We cannot react to such initiatives; we must be part of their development and use. We must also be present with the power and status that comes from representing a broader community of users and creators from the library, cartography, geography and GIS communities (the geomatics community).

Clearly it behoves all associations related to these fields to sit down and openly discuss what it is they want to accomplish and how they feel they can be successful. The issues we face –demographic, policy, technological, and organisational – are such that they can only be overcome or dealt with effectively through cooperation and collaboration at levels we have yet to see. Again, many of these issues and trends to more structure and collaboration amongst communities of librarians and others is more than adequately explored by Birdsall (2000). Smits (1999) also details very nicely the new roles for our professions and adds in analysis and representations. He does make note that this requires new educational opportunities and challenges, including the financial burden on our institutions face with regard to technology and data. More importantly he clearly states that map societies must look at cooperating further. He also raises as interesting point which is of practical concern, that is, which way do we go? Do we federate with library sciences or with cartographic or geographic communities? I think the map and GIS librarians can be even more unique, we can align ourselves with both, and they with us.

The above was further stated by Goodchild when he said:

> Projects like ADL, and the concept of a geolibrary, are bridges between the GIS and library communities….. Thus we find ourselves in the GIS research community at the beginning of a period of exciting collaboration with the library and information science communities"(Goodchild 1998).

Martha Gorman, President/CEO of GITA (Geographic Information Technology Association) sent an email to the MAPS-L list on May 24th, 2001 while she was at the GSDI meeting in Colombia. In that note she asked: "where are all the librarians?". Her feeling was that the issues and topics were ideally fitted to the views and traditions of librarians. I have not as yet responded, but I think many of the issues presented here address the "why not" question. In large part it has more to do with how we have organized ourselves on the margins and less to do with what we have to contribute. We are, for better or worse, on the "front-lines" providing geospatial information services. We, even within our associations, have little in the way of resources to support the level of involvement needed or expected. We are also a small group of highly focused and specialized individuals. We need to change that if we are to be effective. And this point brings us full circle to the issue or metaphor of the Moonshot which Goodchild suggested was given to us through the call for the creation of Digital Earth (it was a moonshot speech not heard).

Moonshots like DE require focus and massive inputs of energy and human resources, not to mention cash. The original Moonshot (1963-1972) was criticized by the astronauts in the space program. In the beginning the engineers designed the spacecraft without windows and no steering mechanism – an astronaut was merely seen as cargo, along for the ride. We are again building a moonshot with an engineering and computational perspective. Those perspectives are needed and are excellent. But they do not answer all the questions, and they certainly do not look at what happens after it is built. This is a natural progression because we are enamoured with the technical possibilities, but we give short shrift to the human, organisation and socio-economic aspects. And let us face facts; in this day and age, the technology (not people) is the winner - it is 'sexy' and it is 'cool'- it is hypable!

Why all the hype why the rush? Perhaps it has to do with new technologies having a culture wrapped in Internet Time. Perhaps it has to do with forgetfulness – we forgot that sharing information is still a new idea for most of the world, while the reality is we have always lived in an information age. Digital Earth will not get off the launch pad because the concept is based upon global access to local data, and most of the planet still does not view access as a "public good" and this will exacerbate the digital divide. It is also because we feel as if we will not be able to make one more decision if we don't get this done right away, so we are tending to rush with the hope that someone will later clean up the mess. The technical aspects are meaningless because what really needs to be done right away is change focus back to the lasting things; our institutions, our culture our memory, our heritage and its relationship to the future. We need to focus the resources *within* the moonshot on institutions and intellect, and less on the infrastructure and Internet. These are revolutionary events and times, but this is not a revolution.

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Limits to Access - You Can Look But Don't Touch

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Improving access to materials should be one of the goals for all librarians and all libraries. Generally speaking there is little disagreement related to this goal. Many collection development policies eloquently refer to their open access and, in the United States, official U.S. government depository libraries are required to provide access to government documents and to provide public access to those collections. And yet collections, however well meaning, will realize upon further study that there are limits to access and map collections are no exceptions from this. And it is the largercollections that may have more restrictions for it is often their sheer size that creates limits. And, while everyone believes that our new digital age and its shrinking world concept will open access to all materials, digital access is actually increasing limits to access as well. This afternoon, I would like to outline these limits. Some are obvious and all types and sizes of map collections suffer from some of these limits.

The most obvious of these are library hours. Many map collections are one person operations, sometimes only part-time, and this will limit access to professional reference service. Many other map collections limit user access to the map file drawers and I believe this is a good policy but then requires more staffing. Those map collections that are associated with Government Document units, at least in the United States, usually have more access hours into the evening and on weekends. The more specialized collections often have no evening hours nor weekend access.

A more serious limitation is often the fragile nature of maps. As collections grow, and age, the fragility of the format becomes more apparent. The fact that maps are not protected by bindings or boxes make them an inherently weak format. The ravages of time, a poor environment, and handling are serious threats to a single sheet of paper. In addition, few map collections have either preservation funds or staffing and certain maps may have to be withdrawn from public access. While digital reformatting is a possibility some of our maps are in such a deteriorated state that they require conservation to be readable. There are also several issues related to digital reformatting which I will address later in this paper.

Next is the level of cataloging. According to the 1990 *Guide to U.S. Map Resources* (1) 60% of the collections were cataloged. In reality, this meant that they were cataloging maps and not that 60% of the collections had complete cataloged collections. A closer examination reveals that many research libraries only have single digit percentages of maps actually cataloged although several have classified larger percentages of their collections. Again, this classification is almost always internal, not represented in their library's online catalogs, and seldom includes newly acquired digital information. Harvard's Map Collection may be a typical example. Prior to 1990 Harvard's collection was almost completely classified although it should be noted that there were three different classifications: one for books, one for antiquarian maps, and another for current maps. All of these classifications were internal meaning that you had to visit the Map Collection, review the card catalog, and then request a specific item. While progress and access has improved I must admit that it remains a part-time effort and it will be sometime before we are able to provide online access to nearly a half million cartographic items. The books and atlases have been reclassified and are now in our online catalog using the Library of Congress classification; new maps added to the collection are cataloged using OCLC and the LC classification; but only a few of the retrospective materials will be found in the online catalog.

Then there is the issue of access and cataloging of digital information. Like many libraries we collect published CD's and various aggregates of unpublished digital geospatial information. For example, the *Atlas of Florida* (2) was published as a CD in 1994 by Florida State University and the Florida Dept. of Education. It is included in our online catalog under its appropriate title and author, however, its one subject heading is "Florida—Maps." This CD has numerous datalayers showing: camping sites, coral reefs, crime rates and many others but we are limited in our ability to archive and access digital information in library catalogs. The importance of a digital data set is, not the sum of its parts, but the individual parts themselves and knowledge of these "layers" is critical to the use of such geospatial information.

Several libraries are reviewing and experimenting with Federal Geographic Data Committee (FGDC) standards for metadata and their compatibility with library catalogs. A similar project has been underway at Harvard and the Harvard Geospatial Library will be launched this Fall. This service will develop separate records for geospatial information: an LC MARC record for the public online catalog and a FGDC metadata record within the Geospatial Library which will provide access to the different layers. A few datalayers will be restricted to Harvard users only, due to licensing agreements, but the goal is to offer access to the system via the Web. Initially, the system will offer access to the Digital Chart of the World, ESRI Maps and Data, Massachusetts GIS Data, Boston Water & Sewer layers, the City of Cambridge GIS data, and parts of the Bureau of the Census Tiger 2000 file. Librarians from the Social Sciences and Earth & Planetary Sciences will receive training on the use of the system thereby creating several points of expertise for faculty and students. Limitations include the fact that not all geospatial digital data will be included in this exploratory environment and there will be a limited number of records relating to paper resources. Types of layers to be considered for future inclusion include raster imagery, orthophotoquads, additional state and city data, and foreign census information.

Digital information brings several issues to the forefront that libraries should be carefully considering. The first question is how will copyrighted materials be treated? In the past we have felt comfortable placing signs near our copying machines explaining the copyright laws and the concept of fair use. Today, as map collections begin to offer scanning services, including scanning and processing of large oversized maps, library staff are actually producing the digital files. As a result, the new large format color scanner that is being acquired by the Harvard Map Collection will offer scan to print only services for the Fall semester of 2001. Our intent is to review the issues with our Office of the General Counsel and to develop forms to be signed by the user specifically stating (limiting?) how the digital image will be used.

The final two limitations are points of contention and an issue for many researchers – whether it be digital or paper. During this past year there was some heated discussion addressing intellectual property rights and permission fees on the MapHist listerv. While an Ortelius map of the America's from 1570 is no longer copyrighted, a library has the option to invoke its intellectual property rights. In other words, the Ortelius map is owned by the individual library which may, or may not, decide whether the map can be copied and restrict how it may be used. For example, as stated above, we will use our new large format scanner only to make printed copies of the maps we scan. Some scholars have criticized this as holding the individual maps as hostages and that they belong to the public and should be available to anyone. I disagree. Too often, people conveniently forget the time, effort, and cost that libraries assume to maintain these national treasures. Those research libraries that have these special collections have often invested enormous quantities of staff time to care for these materials, cataloging many of them, preserving others, and providing adequate housing. The limitations are often defined to make sure that the item remains safe in the collections for future generations and that the items are copied within appropriate environmental conditions and by professionally trained staff.

These conditions and staff come at a price. It is interesting how everyone expects to be charged by a copying store but resents any charges for a similar service at a library. Most research libraries have a special collections imaging services or photoreproduction department. Almost always, there are charges associated with this service. I suspect that some libraries charge more than they have to and I know that some do so simply to restrict that service because it would overwhelm their staff. I do know that we often research and select materials for imaging via email, regular mail, and telephone. This takes our staff away from other primary duties but, at the same time, makes our collections available to a wider diversity of users around the world. Then the items must be transported to our Imaging Services where they then have to be handled: placing large maps against the vacuum board, opening folio atlases, and all the time doing light meter tests. The entire process from researching the collection to identify a specific image for the user to creating an 8 x 10 black and white print or a color transparency is completed by professionals paid by the library. Libraries charge permission fee's to offset some of these costs and seldom enough to make these services profitable. As we move deeper into our offering of digital services it is probable that libraries will have to charge for customized scanning or for parceling data sets and users should be prepared for such limitations.

Libraries are committed to providing access to their collections but access no longer just means providing the right book for the user. The future will bring more customized services especially as libraries include more geospatial information which is not familiar to a large group of their users. I believe that libraries will increasingly expand their offerings at no charge via the Web but will have to charge nominal fee's to offset the customized reference service that geographical information services may require. I also believe these fee's and access restrictions may be limiting but will be offset by the final reward.

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The draft Hague Convention on Jurisdiction and Enforcement of Judgments: what does it mean for libraries?

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Abstract:

The draft Hague Convention on Jurisdiction and Enforcement of Judgments in Civil and Commercial Cases would create jurisdictional rules governing international lawsuits and provide for recognition and enforcement of judgments by the courts of Member States. Member States would be required to recognize and enforce judgments covered by the Convention if the jurisdiction in the court rendering the judgment is founded on one of the bases of jurisdiction required by the Convention. Discussions on the draft Convention began in 1992, and various meetings have been held since then.

The current text of the draft Convention was provisionally adopted by the Special Commission on June 18, 1999, and then was revised at a meeting held at The Hague from October 25-30, 1999. The first part of a Diplomatic Conference on the draft Convention is being held in June 2001, and the second part will be held in 2002.

The library community has a huge stake in the outcome of the deliberations on jurisdictional matters, particularly those concerning contracts and intellectual property rights. ALA has been working with the U.S. delegation to bring forward issues that could adversely affect libraries and to consider changes to the current draft.

The draft Hague Convention on Jurisdiction and Enforcement of Judgments in Civil and Commercial Cases would create jurisdictional rules governing international lawsuits and provide for recognition and enforcement of judgments by the courts of Member States. Member States would be required to recognize and enforce judgments covered by the Convention if the jurisdiction in the court rendering the judgment is founded on one of the bases of jurisdiction required by the Convention. Discussions on the draft Convention began in 1992, and various meetings have been held since then. [The Hague Conference posts various documents from these meetings, such as summaries of discussions, notes and reports, on its web site (www.hcch.net).]

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The library community has a huge stake in the outcome of the deliberations on jurisdictional matters, particularly those concerning contracts and intellectual property rights.

Contracts and "choice of forum" clauses

Our libraries have embraced technological advances and are a significant element in the United States' electronic commerce. We not only provide patrons with computerized access to electronic information products and services, we also use software to run our internal operations. As a result, we are among the largest consumers of software. In addition to expenditures for hardware, software, network support and equipment, and personnel, we are also the largest consumers of fee-based electronic services and databases. The nation's public, academic, medical, special and government libraries expend hundreds of millions of dollars in fees each year for databases and electronic library materials. These purchases are utilized across the entire academic and library enterprise, affecting payroll operations; safety, health and environmental programs; accounting systems; and more. Libraries will undoubtedly be affected by the international rules to which the U.S. agrees regarding where suits may be brought, which country's law applies and whether even onerous terms in non-negotiated contracts will be enforced.

Libraries negotiate contracts for goods and services every day. In doing so, we are able to ensure that the contract terms to which we agree will take into account our mission to the public as well as our business and institutional needs, and that those terms comply with other legal requirements (e.g., state legal requirements for state institutions). Increasingly, though, contracts for information goods and services are non-negotiated instruments, and we expect this trend to continue. The growing use of non-negotiated contracts presents serious issues for libraries, one that could be greatly exacerbated by the Hague agreement as currently drafted.

In that regard, Article 4 of the current draft treaty would make "choice of court" provisions enforceable without exception, including those provisions contained in non-negotiated contracts (such as shrink-wrap or click-on contracts). Our concerns with enforcing terms in non-negotiated contracts that are contrary to public policy extend beyond the choice-of-court issues, but we confine our comments here to the manifest unfairness of allowing one party to a contract to mandate, with no opportunity for negotiation, which court shall have jurisdiction to hear and settle disputes between the parties. The current Article 4 by its very terms implies an "agreement" between the parties, whereas non-negotiated shrink-wrap or click-on contracts allow no opportunity for a "meeting of the minds" -- long considered to be an essential element of a contract.

ALA has suggested to the U.S. delegation to the Hague Conference a revision to Article 4 that would make it clear that such choice of court clauses in non-negotiated contracts with certain institutions would not be automatically enforced. If such an express embodiment of public policy is not acceptable, then we have urged that the U.S. delegation consider at least revising Article 4 to include language that would except the automatic enforcement of court-of-court provisions where the agreement "has been obtained by an abuse of economic power or other unfair means."

Exposure to alleged infringement by users

Access to information is essential not only to research and educational institutions, but also to our citizenry at large. The role of libraries in the dissemination and preservation of information in our society and our culture -- indeed, throughout the world -- is directly and critically affected by today's economic and technological developments. We are being challenged in new ways to ensure the balance in law and public policy between protecting intellectual property and providing access to it. In this regard, we are concerned that the draft Convention, with its rules regarding forum selection, could subject Internet users in the United States to intellectual property infringement in other countries for activities that are lawful in the U.S. For example, users could be sued for engaging in conduct falling within the fair use doctrine, codified at 17 U.S.C. Section 107, or conduct that would be protected by our First Amendment. Such judgments would have to be enforced by U.S. courts under the Convention as it now stands.

The U.S. Delegation has taken the position that the above result would be no different under the draft Convention than it is now, that is, U.S. courts would ordinarily enforce such judgments today. (And it is the reverse situation -- getting foreign courts to enforce our court judgments -- that is sought, in part, to be remedied.) Even conceding that probability, we believe that one cannot disregard the practical, and perhaps dispositive, effect of the treaty, if signed, on the ability of our courts to refuse enforcement. The only grounds then available for an American court to refuse would be Article 28(f) of the Convention. That provision allows a court of a member country to refuse to enforce a judgment if recognition of the judgment "would be manifestly incompatible with the is public policy" of the enforcing state. Article 28(f) must be viewed as an extraordinary "out," lest the U.S. lose the benefit of the treaty in ensuring enforcement of our court judgments. As such, it is far better to ensure that the Convention does not put our courts in that extremely difficult situation.

These and numerous other problems that have been identified in the course of recent discussions about the draft Convention have led to a debate over whether copyright cases and other intellectual property matters should be taken out of the draft Convention altogether. ALA has not yet taken a position on that issue, but it is clear that it would be in the public interest for the U.S. delegation to promote continued discussion of these issues among the various stakeholders.

Other issues and other stakeholders

There have been many issues raised on behalf of consumer protection groups which have studied the draft Convention. See, for example, http://www.cptech.org/ecom/jurisdiction/hague.html. Other stakeholders that have been participating in these meetings are the technology industry, including internet service providers (ISPs) and the copyright content industry.

ISPs, for example, have expressed concern that the current draft treaty could accelerate a trend of foreign countries claiming jurisdiction over U.S. web sites, such as in the recent controversial case involving Yahoo! In that case, a French court ordered Yahoo! to prevent web users in France from accessing a site containing racist materials. Under the draft treaty, a U.S. court could refuse to enforce the French judgment only if the American court found that enforcement would violate public policy (such as embodied in our First Amendment). Other countries who were signatories of the treaty, however, might well enforce the French court judgment.

Future developments

As of this writing (June 8, 2001), the U.S. Delegation is participating in the first part of a Diplomatic Conference being held in The Hague beginning on June 6, 2001. A new draft of the Convention is expected to emerge from that meeting. That draft, which we hope will be available in time for the IFLA General Conference in August 2001, will then need to be reviewed and analyzed by the affected communities in the U.S. and the other member States. As with the issues discussed above and others as well, we believe that there must be continued public discussion, as has occurred over the past six months, in order for the U.S. community and the U.S. delegation to be fully informed.

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The European Council Directive on the harmonisation of certain aspects of Copyright and Related Rights in the Information Society: a brief overview

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Abstract:

The European Council Directive on the harmonisation of certain aspects of Copyright and Related Rights in the Information Society has been called the most controversial Directive in the history of the European Union. Progress leading up to the adoption of this Directive in April 2001 is given, including the lobbying efforts of library and other concerned consumer groups. Brief details of its most controversial Articles are outlined.

Background

As it states in this Directive, the European Council needed to create a general and flexible legal framework in order to foster the development of the information society in Europe. This requires, among other things, the existence of an internal market for new products and services. Copyright plays an important part in this process in protecting existing works and in stimulating the creation and development of new works. Another of the aims of the EU in introducing this Directive is to continue the programme of harmonisation of all copyright and related rights legislation across the Member States to ensure that competition in the internal market is not distorted.

Over the last ten years as part of this programme of harmonisation, Member States have had to incorporate changes to their copyright laws on computer programs, extending the term of copyright protection, rental and lending rights, satellite and broadcasting rights, and a new sui generis right protecting databases. This latest Directive is intended to continue this programme by harmonising the definition of the reproduction right and the exceptions and limitations to copyright which allow non-infringing uses.

The Directive also serves to implement a number of international obligations following the adoption of the WIPO treaties of 1996 including the communication to the public right and a legal protection against unlawful circumvention of technical protection devices and rights management information.

What Parliament said in 1997

The Copyright Directive has enhanced the position of the rights holders by granting them more rights and protection while at the same time narrowing down the rights of consumers.
"*....the European model of the information society must be driven by democratic, social, cultural and educational concerns and not dominated by economic and technological interest*"[1].

As can be seen from this statement, the European Parliament did say in 1997 that they recognised the importance of social, cultural democratic and education concerns and that the Information Society must not be dominated by economic and technological interests. However, they appeared to have forgotten what they said. It is very clear, if one studies the text of the Directive, that their priorities lie in the protection of economic interests. Few dispute the fact that such protection is essential. High protection is needed in order to encourage the creation of new products and services –**but** - the pursuit of ideals of freedom of expression; the dissemination of information, ideas and culture are equally essential and should not be disregarded or ignored in the pursuit of commercial interests. There has to be an equitable balance. It was up to librarians and other interested consumer groups to uphold these ideals in the consultation and lobbying process.

Directive Progress

The first version of the text of the Directive was issued in December 1997. It went out for consultation in the following year and over 300 amendments were suggested. The user community did not approve of the original version. It was very unbalanced being heavily weighted towards copyright holders and would have made illegal many existing acts of copying and use – acts which had up till then been considered harmless to copyright holders and which were necessary to maintain the public interest balance.

Despite a strong lobbying campaign, in February 1999, the European Parliament chose to ignore the voice of the consumer and made the text even more restrictive. Our cause was not helped by the all singing, all dancing lobby organised by the music industry on the eve of the vote. Its priority was to tighten up the Internet to prevent the unauthorised copying and sharing of music files. The fact that such tightening up also threatened to put a stranglehold on existing research copying as well, was completely overlooked. The next version of the text issued by the European Commission in May 1999 was therefore even worse than the original.

During the rest of 1999 and the most part of 2000, the text was considered in detail by a working group of Government representatives and a Common Position was agreed. This text, although not ideal, demonstrated that this working group was at least trying to achieve a balance of interests. The text was then considered again by the Legal Affairs Committee of the European Parliament, debated in Parliament and finally adopted in April this year.

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[1] Preamble A to the Parliament's Resolution on the information society, culture and education (Morgan Report A4-0325/96) of 13 March 1997

The rise of the European consumer groups

Having taken nearly four years to be agreed, this Directive is considered to be the most controversial Directive in the history of the European Union. It is arguably the most lobbied. From the beginning, it was clear that there would be conflict between rights holder representatives and user groups. From the user point of view it was essential to ensure that a reasonable balance was maintained between the need to establish as strong a regime of protection as possible for rights holders in the creative industries, and the wider public interest. Although understandable, rights holders wanted much stronger protection which threatened to upset the balance of copyright. Librarians were concerned that too much control in the hands of those whose interests were purely commercial threatened research and education and access to information and knowledge. The consumer lobby, therefore, had to fight to ensure that the opportunities of cyberspace were available for all.

The European Fair Practices in Copyright Campaign was formed. This was a strategic alliance of library, education, consumer, and disability groups. The aim of EFPICC was to make sure that there were effective exceptions to cover research, education and private copying.

From hitting rock bottom in May 1999, EFPICC lobbied hard for a year with the result that the Common Position text at last appeared to reflect our interests. We could not rest at this stage, though, because the detail of the exceptions was under consideration once more when the Common Position text was debated in the European Parliament. Some rights holder interest groups at the last minute attempted to curtail the exception for libraries by trying to limit any copying by libraries and other publicly accessible institutions to archiving and conservation purposes, added to which they wanted us to pay fair compensation for the privilege! Europe's libraries, spearheaded by EBLIDA, mounted a strong lobby to counter these harmful amendments and fortunately this time the Parliament saw sense and chose not to adopt them.

Controversial articles

Included in the new rights is the Communication to the Public Right which was originally adopted into the WIPO Treaties. "*Member States shall provide authors with the exclusive right to authorise or prohibit any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them.*" A similar right is given to performers phonogram and film producers and broadcasters. This is the right which governs the making available of works on the Internet.

The Directive also contains a precise definition of the Reproduction right (this was not adopted by WIPO) and which includes all temporary copying such as caching. This right is limited in the list of exceptions provided the reproduction has no independent economic significance. This is the only mandatory exception. All the other exceptions and limitations given in the Directive are optional. Member States can pick and choose which ones they want to implement. For librarians and the other consumer lobbyists, this seemed strange that a Directive which aimed to harmonise the exceptions could result in Member States doing their own thing.

Library exception

Member States are permitted to provide for an exception or limitation for the benefit of certain non-profit making establishments, such as publicly accessible libraries and equivalent institutions, as well as archives. However, this is limited to certain special cases covered by the reproduction right only. So it is likely that certain libraries will be allowed to continue copying from printed material for certain purposes and this could extend to copying works into digital format but as there is no exception for libraries from the Communication to the Public Right, any on-line delivery of such material would have to be authorised, probably under a licensing scheme. However, for research or private study purposes, on dedicated terminals on the spot in the library, material not subject to any licensing or purchase conditions may be communicated to the public. Thus, if our Government so chooses, we may be able to copy an existing print work and allow our users to access it in the library but we will not be allowed to network it without authorisation.

Technical protection systems

The most controversial article concerns the protection for technical devices against unlawful circumvention. This again is another of the WIPO obligations. If a technical protection device is used to prevent access or use then this may not be circumvented for unlawful purposes. The problem is that lawful uses include nearly all exceptions. This would effectively nullify any exceptions, as permission (and probably payment) would have to be obtained to access and use the protected work. Users were justifiably alarmed at this. The way this has been resolved is a statement saying that governments may intervene if there is no satisfactory agreement reached between rights holders and consumers to ensure that the exception can be carried out. However, there is a sting in the tail in that if there is a contract to use the work then governments are prevented from intervening. To put it mildly, this is likely to cause a few problems!

Conclusion

The Directive will directly affect the copyright laws of all 15 of the European Community Member States and the ten candidate countries from Central and Eastern Europe. These nations will be obliged to change their existing laws. However, it is extremely unlikely that all these laws will be the same as the exceptions and limitations, apart from the one mandatory one, are all optional. Each nation is free to choose which ones they wish to implement from the list according to their priorities. They are unable to add to the list.

We will have to wait and see how each Member State interprets the Directive and implements the provisions. Member States have 18 months in which to implement the Directive into their legislation. This was reduced from 24months in line with another important and related Directive on E-commerce. European librarians will be trying to ensure that balance of interests continues to be maintained.

Our overall verdict is that it could have been much much worse. We believe we can congratulate ourselves on a successful lobbying campaign. European librarians and other user groups have proved that they have a legitimate stake in the copyright debate by playing a major part in ensuring that Europe will have an inclusive rather than an exclusive Information Society in this 21st century.

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Shared challenges and in a networked cultural space

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In “Digital Libraries and their Challenges” (henceforth, “Digital Libraries”) the author reported on a tour of leading US research libraries that are investing significantly in (and have significant experience of) innovative online collections and services.[1] This paper supplements that report with observations about challenges confronting cultural heritage organizations more generally; that is libraries, museums and archives.[2]

“Digital Libraries” reported five key challenges that are briefly summarized below.

- Architectural and technical. Two related changes both relying on shared effort to:
    - design systems that enable libraries to manage (and manage access to) heterogeneous and distributed mixed media collections; and
    - investigate potential applications of new technologies in libraries.

- Standards and best practices. Again conceived as some kind of shared effort capable of meeting library needs for:

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[1] See Daniel Greenstein, "Digital Libraries and their Challenges", *Library Trends* 49:2 (Fall 2000). A pre-print edition is also available from http://www.clir.org/diglib/ltrends.htm

[2] Visits to individual libraries so important to “Digital Libraries and their Challenges” have continued and added new perspectives. More crucial, however, was discussion at a recent meeting involving the directors of museums, archives, and libraries convened jointly by the Council on Library and Information Resources (CLIR) and the National Initiative for a Networked Cultural Heritage (report of the meeting is forthcoming from CLIR).

  - information sharing sharing e.g. about how to develop, maintain, and support use of digital libraries collections and services;
  - community-wide agreements about minimum-level data standards that ensure interoperability and persistence of digital information; and
  - agreed "benchmarks" against which to evaluate different digital library collections and services.

- Strategies for developing sustainable and scaleable digital collections. Documentation of current policies and practices focusing on those that appear to be particularly effective.

- Getting good information about uses' information seeking behaviors and needs, not just with library resources but with scholarly information more generally.

- Securing long-term access to digital information, crucially by gaining some practical preservation experience and focusing that applied effort on electronic scholarly journals as a matter of priority.

The piece concluded that progress in these areas was likely to be beyond the means of individual libraries and library consortia and associations and as such would require new organizational forms.

When looking at the challenges confronting cultural heritage organizations generally, a slightly different set of priorities emerges. The remainder of this papers introduces these challenges under four heads: guidance in strategic planning; provision of key infrastructure; provision of mechanisms that enable individual institutions to take full advantage of planning guidelines, infrastructure, etc.; and review and reassessment of the roles, goals, and values of cultural heritage organizations. The paper concludes with asn indication of some initial next steps that may help confront these challenges.

1. Strategic planning. Cultural heritage organizations are thinking a great deal about fundamental questions, notably about why, how, and to what end they are (or should be) harnessing information technology. The need for some guidance in strategic planning is felt particularly in the absence of planning, decision-making and risk-assessment tools that may help senior managers take decisions that will shape their investments in online collections and services. Targeting senior managers, these tools would act as issue-oriented guides aiding decision-making while pointing to more detailed technical or implementation guides. Descriptions of some of the key decision-making tools that senior managers require are supplied below.

- Business planning frameworks. Cultural heritage organizations are increasingly being asked to justify investment in online collections and services in terms more familiar in commercial than in not-for-profit and charitable sectors. This is not tantamount to saying that professionals in the heritage sector do not recognize or think in terms of value, cost, and benefit. Rather, they are not as familiar with the tools used in the commercial world to formalize that thinking. Accordingly, they seek business-planning frameworks –toolkits that explain the component parts of a business plan and how those parts relate to one another (how, for example, decisions about product development constrain but also may reflect thinking about marketing). A particularly effective business-planning framework will also outline some of the key options available to an organization as it fleshes out any component of its business plan.

- Benchmarks of institutional readiness. Using these benchmarks senior managers could assess their organization's progress with regard to its development of online collections and services. They would aid managers in making decisions, for example, about whether to overhaul the institution's information technology infrastructure, rethink its organization and management, or enter into strategic alignments with other cultural heritage organizations, associations, etc.

- Risk assessment tools. Following on directly from benchmarks of institutional readiness, risk assessment tools would assist senior managers in assessing the level of risk involved in undertaking strategic initiatives such as those indicated in the preceding bullet.

- Cost-benefit evaluation of different organizational forms. Small- and middle-sized cultural heritage organizations are more interested than large ones in exploring the different organizational forms with which they might proceed into a networked space. They are especially interested in organizations that involve two or more parties in some kind of partnership. Numerous and innovative collaborative and partnering ventures exist and supply a rich source of empirical data about the efficacy of these arrangements. That data needs to be collected and brought together in decision tools that reflect on practical experience to supply information about fiduciary, legal, and other attributes of the various partnering, collaborative, membership, commercial and other organizational forms that innovation might take.

As the reference to organizations implies, decision tools needn't be based on speculation. Rather, they should be based on empirical evidence gathered from the substantial experience that libraries, museums, and archives are already developing with online collections and services.

2. Provision of key infrastructure. The absence of key infrastructure is seen by all as an impediment to innovation in a networked cultural space. Some high-level community-wide agreements about the application of data standards and information architectures are seen as essential for ensuring some minimum common level of quality, consistency, persistence, and interoperability across online cultural collections and services. Beyond this, however, there are key differences between the large research libraries and the broader cultural heritage community. The large libraries seek to share research and development effort with a view to developing key infrastructure locally within their own institutions. In a broader group, discussion turns to self-sustaining utility services that enable individual heritage organizations to get more mileage for every dollar they spend on building a networked environment. Some of the utilities are listed below alongside reasons for considering their development. A fuller list is available in a recent number of *CLIR Issues*.[3]

- Digitization services. Cultural heritage organizations are actively producing digital surrogates for their rare and special holdings and making these available as online exhibitions or databases. One wonders whether these institutions would get more value for their investment if they could outsource production to utilities developed specifically to serve the sector, rather than relying as they often do now on one or two key members of staff supported by transient graduate student labor or its equivalent.

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[3] Daniel Greenstein, "The Digital Library and B2B Services", *CLIR Issues* 17(September/October 2000)

- Distribution services. Online collections and services require networked servers and often very complex access management applications. One wonders whether there are economies (and functionality) to be had in some other organizational model more akin to traditional utilities (power, water, etc.) than to consortia or membership organizations?
- Alerting services and open software libraries. Can cultural heritage organizations do more than they are currently doing to keep one another informed about effective applications or developments of new technology?

3. Provision of professional development opportunities. Cultural heritage organizations need to recruit and keep information professionals who are appropriately skilled to support forays into a networked information space. Here there are any number of challenges which must be met if cultural heritage organizations are to take full advantage of emerging decision tools, standards and best practice guidelines, utility services and the like. Such challenges include:

- thinking in new ways about recruitment and professional qualification and developing new processes to appoint and maintain the professional staff needed to develop and maintain an innovative network presence;
- ensuring information professionals on staff are afforded appropriate training opportunities (mounted on a professional or semi-professional basis) as well as opportunities to engage with colleagues at other institutions so they may keep abreast of new developments and new approaches; and
- providing guidance in change management to senior managers and leadership training to the next generation of senior staff.

4. Re-assessment and review of the cultural heritage organization's mission and values. Any discussion of the challenges confronting cultural heritage organizations in a networked space ultimately arrives here. It is hardly surprising. Fundamental understandings of mission and value act as touchstones against which potential new directions are evaluated. Indeed, they are the stuff with which new directions and opportunities are ultimately defined and articulated in the first place. An organization's mission and its values will even inform very practical and detailed implementation decisions. Recent research on institutional strategies for developing sustainable digital collections, for example, suggest there aren't any formula, for sustainability so much as options that serve the cultural heritage organization more or less well as it seeks to promote and advance its own developmental agenda.[4] Even the most specific methodological questions (e.g. about the analytical techniques appropriate for assessing users' needs and interests and the selection of metadata standards and data formats for digitizing special collections) are unlikely to be resolved with reference to any absolute standard so much as with a reference to institutional mission and values.[5]

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[4] See forthcoming DLF reports by Tim Jewell, Lou Pitschmann, and Abby Smith (from http://www.clir.org/diglib/collections.htm). The reports document collection development strategies for electronic commercial resources, for gateways to third party public domain Internet resources, and for digitized surrogates of holdings in special and rare collections. The theme is apparent in reports by Smith and Pitschmann.

[5] See Denise Troll, "How and why are libraries changing" (February 2001) from http://www.clir.org/diglib/use/whitepaper.htm" and Neil Beagrie and Daniel Greenstein, "A strategic policy

There are several interests in this fundamental reassessment and review. Somewhere at their heart are the costs involved to cultural heritage organizations in developing a niche in a networked space and the competition that heritage organizations experience in that niche from various commercial entities. The combination underpins a wish to re-examine the fundamental principal that has applied so far in the development of networked cultural collections and services, notably that such collections and services, derived as they are from public institutions, must be free at the point of use. It opens out as well onto a range of ancillary question:

- ☐ about how to balance not-for-profit service goals (so familiar in the sector) with the need to think about cost-recovery and sustainability for the high-cost networked collections and services;
- ☐ about the prospects for cultural heritage organizations in transcending their current and highly constrained (perceived) role as "digital content farms" and evolving value added networked services the likes of which compete viably with commercial instantiations; and
- ☐ about whether there is room in a networked space for the cultural heritage sector as a whole or only for certain organizations whose pride of place is determined by endowment, collection depth and scope, or fund-raising capacity;

Though undoubtedly long, this list of challenges produces a concrete agenda for heritage organizations, their associations, and funding bodies. The requisite development effort, for example in the creation of key infrastrutural services, is clearly beyond any single institution and is likely to depend on innovative partnering arrangements which overcome the severe constraints that impinge on more familiar consensus-based associations when they take up operational services.[6] Still, one is impressed with how much may be accomplished in advance of such new organizational forms actually emerging. Applied research seems a particularly fruitful area, one that could take off in vital new directions with joint input from libraries, museums, and archives. The decision tools and data that can support strategic planning, for example, do not require expensive or complex organization. Research may go as far in identifying the good or at least effective practices that experience developing networked cultural heritage collections and services is beginning now to reveal in libraries, archives, and museums. Although the utility services will require significant organizational and business planning (not to mention considerable capitalization), the development of service requirements is an essential starting point that is research based. Any reassessment of the heritage sectors' goals and values could be a drawn out, painful, inconclusive, and potentially even demoralizing process. Very promising if limited first steps may none the less be taken through some careful consultation with our various using publics and through some investigation into their expectations and needs and how they are met by various sources of information, education, and cultural enrichment. Here the aim is not simply to assess how users engage with online services mounted by cultural heritage organizations, but how they engage with information sources generally and how their contact with cultural heritage organizations fits into whatever broader picture emerges. Although this too brief forward look does not promise much for professional development, one cannot help thinking that these issues will be tackled more easily by cultural heritage organizations that take this more pro-active role in determining the dimensions and shape of their networked future.

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framework for creating and managing digital collections" (1998) from http://ahds.ac.uk/manage/framework/framework.htm

[6] "The Digital Library and B2B Services", op. cit.

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Artifacts in digital collections

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1. The Preservation Imperative

The "information explosion" sparked by digital technology has fostered an increasing awareness of the sheer mass of information available today in a variety of media, from traditional formats like paper to the more recent film, optical, and magnetic formats. Today, the world produces two billion gigabytes of new information a year, or roughly 250 megabytes for every man, woman, and child on earth (Berkeley 2000). Institutions charged with collecting, storing, preserving, and making accessible recorded information have struggled to keep pace with the growth of information production, even though their brief is to collect only a portion of what is published and an even smaller portion of what is produced and disseminated in unpublished form.

Although information overload is not a new problem, the introduction of digital technology onto campuses and into research libraries has fundamentally altered the information landscape, with potentially serious ramifications for scholars and students. The creation and dissemination of digital resources are creating new models of service and access, such as licensing rather than owning essential intellectual assets. The mutability of digital documents is redefining what constitutes a text—are back issues of a journal that are in digital form a bunch of articles or a rich database? And the conversion of texts into hypertexts is resulting in increased interdisciplinary research, when a researcher in one field serendipitously find resources normally confined (in print) to another.

Accompanying these trends is another series of trends that at first seem paradoxical. There is increased scholarly attention to original, unreformatted materials. And there are eruptions of public outcry when discoveries of material losses in libraries and archives are made. While scholars demand ever-increasing attention to an ever-expanding range of candidates for preservation, library budgets simply do not support those demands. Preservation has thus become an "unfunded mandate," the more pernicious for being often implicit. Academic institutions have learned the huge costs of penny-wise facilities management and "deferred maintenance." It is reasonable to fear that we are now incurring similar future costs by deferring preservation. With preservation, though, there is a crucial difference: a significant part of what we avoid thinking about today will be lost forever by our neglect. Library collections are among the most valued of a research institution's intellectual and cultural assets, assets that form a crucial part of what might be called "public goods." But, as is the case with public goods, many make claim to their use, but few the responsibility for their well being. This paper focuses on preservation—what it takes to ensure the present and future usability of collections—for without preservation today, there will be no access tomorrow.

Preservation is a critical part of good stewardship of our intellectual and cultural heritage. Its chief challenges at the turn of the twenty-first century are fourfold:

Quantity. Because of the relentless growth of research libraries and their collections, an immense number of research items demand resources to remain accessible. In 1999, the 121 member libraries of the Association of Research Libraries (ARL) reported owning a combined total of 462,965,204 volumes. The greatest period of growth for research libraries occurred after the First World War, after the Second World War, and in the last decade. Looking at 12 representative public university libraries during this period reveals a typical growth pattern.[1] In 1907, these libraries held an average of 107,425 volumes; by 1961, that number had grown to 1,772,831, and by 1995, the average per library was 5,334,620 (Gerould).

Stability of media. Library collections exist in a variety of physical formats that are vulnerable to one degree or another. As the rate of information production has increased, the storage medium has become more compact and efficient. However, this miniaturization comes as the expense of stability and longevity. With the exception of preservation-quality microfilm, the new media of the twentieth-century are more fragile than those of the nineteenth, including the by-now infamous wood-pulp paper that deteriorates into flakes over time (Conway 1996, 5). The many media that have been invented in the last 150 years to capture light and sound are generally extremely fragile, dependent on machines for playback, and subject to rapid technological obsolescence. The wax cylinders on which are inscribed the earliest known recorded voices of Native Americans are susceptible to mold, heat, scratching, skin oils, and physical trauma. Moreover, they are dependent on playback equipment for which no spare parts are manufactured and for which there are few technicians skilled in repair. Yet the information on them is invaluable and must be saved for future generations.

Economics. Since 1993, preservation budgets in ARL libraries have remained flat and, in real dollars, are shrinking. At the same time, the number of staff assigned to preservation is at a ten-year low (Scott 1999). Yet the demand for access to original materials has grown, especially to those materials in special formats that often are at greatest risk from physical handling or environmental stress. Meanwhile, as the technology for reformatting for access has greatly improved, the funding for preservation continues to decrease, since more money goes to digital reformatting of items in high demand and less to microfilming the low-use brittle books that are rotting on shelves.

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[1] The libraries are: University of California, Berkeley; University of Illinois; Indiana University; University of Iowa; University of Kansas; University of Michigan; University of Minnesota; University of Missouri; University of Nebraska; Ohio State University; University of Washington (Seattle); and the University of Wisconsin.

Contingent Value of artifacts. The most difficult challenge for libraries is deciding how to set priorities for preservation. As long as the claim on preservation resources exceeds the available funds, from both internal and external sources, there will be a necessary triage of materials that get treatment. An example of this trend is the recent elevation of nineteenth-century popular imprints and ephemera to a status of high research value. Providing appropriate access to those items, which are at high risk from embrittlement and ordinary physical handling, has put an enormous strain on library resources. Knowing that the intellectual interests and research methodologies of scholarship will change over time, research institutions have collected "just in case" there is a demand in the future, rather than "just in time" for demand. Research libraries and archives are full of items that have not been consulted in decades, if ever, and whose future demand is unpredictable. How do a library and its home institution make sound fiscal and intellectual decisions about what to preserve, when, for whom, and at what price? Despite the enormous collections of printed materials that have been amassed, entire categories of primary sources have disappeared before collecting institutions and their users understood their value. The most notorious example of neglect is the fact that 80 percent of all silent films made in the United States are gone without a trace, and 50 percent of films made before the Second World War have also perished and will never be recovered. The loss is so great that we do not even know what has been lost.

2. The Artifact in Question

"Artifact" is a term that can be confusing because it masks a number of unexamined assumptions. In common academic parlance, "artifact" can be used to mean a physical object, a primary record, or a physical object that constitutes a primary record.[2] From the point of view of a researcher, however, and for the purposes of this report, an artifact can be defined as an information resource in which the information is recorded on a physical medium (such as a photograph or a book), which may or may not be unique (holograph letter or a paperback book), and in which the information value of the resource adheres not only in the text or content, but also in the object itself. In other words, artifacts are things that have intrinsic value, independent of the informational content.

Recently, scholars have identified an increasing number of library items that have intrinsic research value as physical objects. The Modern Language Association (MLA) defines an artifact or primary record as "a physical object produced or used at the particular past time that one is concerned with in a given instance" (MLA 1996). The definition goes on to assert that, for all practical purposes, all historical publications, even those produced in mass quantities by mass production techniques designed to minimize deviations from a norm, may have some qualities of uniqueness.[3] Since uniqueness is one of the defining features of something that has artifactual value, this position would seem valid. The problem for libraries, however, is that by definition these items would therefore have a claim not only on the attention of the scholar, but also on the budgets of preservation departments. Whether one disagrees or accepts in toto this definition and its implications, the difficulty it presents for libraries is that they are not, have not been, and are unlikely ever to be funded to meet the need to collect and preserve literally everything of potential research value. For libraries, this expansive view of artifactual value presents problems that are not primarily theoretical, but eminently practical.

Given the task of identifying achievable, fundable preservation strategies and goals for libraries, we must identify intrinsic artifactual value and to do so in way that, following the spirit of preservation principles, would accept some loss as inevitable and sought rather to manage the risks of *unacceptable* loss.

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[2] Of course, in scientific laboratories, "artifact" also denotes a substance that is a by-product of some external action or agent.

[3] The statement addresses only text-based sources. If this standard of value were extended to visual and sound resources, the universe of primary records grows exponentially.

2.1 Selection for Preservation of Original

The library preservation community has agreed on certain cardinal features of physical objects that warrant preservation in their original formats. They are:

Age
Evidential value
Aesthetic value
Scarcity
Associational value
Market value
Exhibition value

Objective criteria or established practice determine many of these features, and the criteria vary little among libraries. They are, in short, best practice; several written policies are included in Appendix III as meaningful examples.

We are not talking here about those categories of artifacts that are always, as a matter of course, retained in the original. That would mean books printed before 1801, which are usually segregated from general holdings in a rare book collection and subject to different handling and preservation protocols; manuscripts and archival materials that exists only in one copy; items with high market value, and so on.

The value of the artifact for research purposes—as opposed to monetary value or exhibition value—can be thought of as chiefly evidentiary. An artifact is of value to the extent that it testifies to the information being original, faithful, fixed, or stable.

Originality: An original manifestation of a book, photograph, or recorded performance is valuable because through it a scholar may come closer to uncovering the original intent of the creator and or publisher, or both.[4] When copies yield insufficient information about original intent, then access to the original may be needed. Reformatting and copying information is analogous to translation from one language to another. Depending on the source and the target language, as well as the skill, care, and cultural biases of the translator, something is always lost. A good translation, like good recopying, is one that loses the least amount of original content and intent.

Fidelity: The artifact is also useful and at times essential in establishing the authenticity of an item. In other words, it has forensic value. How does one know that the item in one's hands is what it purports to be? There are internal clues in a document that give evidence of authenticity, of course, such as the accuracy and appropriateness of the content. A diary that is dated 1901 and contains references to television broadcasts, for example, is unlikely to be what it purports to be. But in addition to the intellectual information, there is also the external information contained in a physical manifestation that also provides clues of authenticity and integrity. Erasure marks on a sheet of paper, splices in a film, white-out on property maps—all these are physical clues to the integrity of the object and, hence, the authenticity of the information recorded in the object.

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[4] The instances of published versions differing from the presumed intent of the creator are legion in books, films, and so forth. In those cases, the sources that contain information about the work in pre-publication form (e.g., draft, outtakes, proof sheets) are also required to reconstruct original intent.

Fixity: The content of the artifact when it was first produced constitutes the text (in the case of textual materials) or the document (in the case of a photograph, say, or an opera performance). If one is holding a fifteenth-generation fax, one cannot guarantee that the full content of the original is conveyed except by comparison with the original, which has fixed the content by recording it at one instant in time. One of the wonders of mechanical reproduction of text after Gutenberg was the way that replication by machine en masse tended to fix texts that had previously been taken to be somewhat fluid. This is one of the innovations of the print regime that appears to be eroding in the digital realm.

Stability: The persistence of an object over time leads to the stable and continuous accessibility of the information contained in it. Documents whose physical substrate changes over time themselves change. Film that gets spliced and repaired loses content; digital files that get reformatted into a newer version of a software program change; photographic images printed or displayed in various manner shift tone. When one looks at a thirty-year-old image of a woman in a red coat printed on paper that fades, and looks at a contemporary image made from the same negative projected through a slide projector, chances are there will be two different reds that constitute "the coat." The content of that red is not stable, and it is difficult to mentally efface the effects of age and reformatting and determine whether the coat was originally scarlet red or crimson red.

There are, in addition, artifacts valuable for research because the format is itself the subject of investigation. Original bindings carry evidence of print history, just as original daguerreotypes carry evidence of an early photographic technology. In these cases the object itself is the primary source, not the information it carries.

Also of value to the research process is the physical encounter between the researcher and the object, an encounter that can help to prime the scholars' imaginative and analytical skills. While this factor is highly subjective and difficult to quantify, it is commonly cited by scholars as being, at least at some stage of their career, of irreplaceable heuristic value. A medievalist who has never worked directly from manuscripts is at a disadvantage, just as a biographer of Thomas Jefferson who has worked exclusively from the printed editions of his letters may be said to work at one critical remove from the subject. Given the toll that physical handling takes on all types of materials, though, scholars and library professionals should accept the fact that surrogates can be judiciously used by those who have a familiarity with original source materials and, from the perspective of both preservation and convenience of access, are often preferable. [5]

2.2 Mechanisms for Determining Value

Questions about the nature of the artifact have caused scholars and library professionals to realize that, even for the early part of the nineteenth century, much more information of potential research value exists in traditional formats, such as paper and image, than had previously been recognized. Consequently, the process of redefining what constitutes an artifact must be done not only for new media, but also for a considerable body of information from the 1800s. The fragility of paper-based materials, especially newspapers, printed since 1850 has been a concern for some time (Marley, Baker, Smith, Cox). Because of their fragility, preserving one or more instances of all imprints of newspapers poses enormous technical as well as financial challenges to collecting institutions. More recently, there has been a growing awareness of other kinds of artifacts from the nineteenth and early twentieth centuries that also require the attention of preservationists if they are not to disappear. Often, these are materials that serve as primary evidence of popular culture that were neglected by many researchers until recently. Such materials range from baseball cards to ladies' magazines to dime novels to political posters—all matter produced for a mass market and using the cheapest and most available materials.

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[5] See, for example, the case of the editorial team working on the James Boswell Papers at the Beinecke Library (Bouché 1999). The international team of editors came to prefer the use of digital scans of the original manuscripts to working from the originals in New Haven. In part this was the matter of convenience—the work could be done wherever the editors were located and obviated a series of disruptive trips to New Haven—and in part because the scans provided superior legibility.

The examples from popular culture raise perhaps that most difficult of questions: how to weigh the relative merits of various claims on scarce preservation resources?

First, let us distinguish the issues. Scholars, archivists, and librarians have always assumed a hierarchy in collections. The artifact or original document was the item initially collected and accessioned in the collection. When it was prized for some unique aspect of its material or historical existence (e.g., status as a first edition, holograph manuscript, signed author's copy or presentation copy of a work) the artifact was given priority for preservation. In the absence of that uniqueness, a lower level of care might be given and a lost or damaged copy replaced with one very different in physical manifestation (e.g., a photocopy or reprint). The value of the unique artifact could be defined variously as historically important, rare, associational, and so on. In each such instance, however, there was an individual, material object that someone, somewhere defined as valuable enough to retain.

The Achilles heel of traditional definitions of the artifact lay in the value judgment that determined artifactual status in the first instance. What were the grounds for deciding in favor of one object and against another? How can libraries cope with the fact that the value of the artifact is never quite the same to different researchers? While one scholar will seek certain information from the item, others from different disciplines will require other kinds of data, perhaps involving a wholly different way of handling the object. [6] Pragmatically, can one say that these users are even seeing the same object?[7]

Scholars and others who use artifacts may think of them in the aggregate as unified objects. On the other hand, when they come to interrogate the artifact for their research, they tend to focus on parts rather than the whole (which is not, of course, to say that the relationship of part to whole is not crucially important). One may define the artifact as a series of multiple discrete components—handwriting, watermarks, marginalia, splices, evidence of use—each potentially a focal point for scholars and others, depending on what they are studying. From the standpoint of usage, what people normally do with artifacts is to analyze discrete sets of information contained within the object. The fact that artifacts are complex, that they lend themselves to a variety of intellectual endeavors, means that we must think of them in terms of their parts, and not just as a whole. One way to think of the artifact, then, would be as a multiplicity of informational sets, including the material form of the object, and its contextual history, where known.

Not the least aspect of the artifact's complexity is the fact that different scholars from different fields will perceive and use it in different ways. A first edition of a novel by Dickens will be used very differently by an historian of Victorian England researching the economics of the book trade, a literary scholar concerned with different versions of the work, an art historian interested in Victorian book illustration, a textual historian interested in layout, and an historian of book making. Each will consult the same artifact for very different kinds of information, and each one may well not even remark (or have the technical knowledge to do so), the particular information sets sought by the other researchers. Similarly, photographs of the Civil War by Alexander Gardner can be used to study the battles, or the public's reception of the war in North, of the history of clothing, of medicine, of gender, or of the medium itself. Which subject interest and methodology would require use of the original, which could make do with copy prints, which could make use only of the original photographs in their original presentation portfolios, and which would actually be enhanced by access to the images through digital delivery which could then be manipulated to magnify details, for example?

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[6] Research disciplines train scholars to attend to the materiality of their objects of study in very different ways. It is not a criticism, but a fact of research, that historians, literary scholars, philosophers, art historians, historians of science, linguists, text editors, and so on, are *supposed* to examine quite different aspects of an object of study, which, in the case of artifactual objects, will certainly be complex. Sometimes there may be overlap, more often not. The needs of all serious users are legitimate, and preservation should serve them as effectively as possible.

[7] Artifacts derive their value from how they are viewed and used in a given culture at a particular moment. As cultural variables, they will be viewed and studied differently in different periods. A holograph copy of a speech by Robespierre would certainly have a different value for a royalist in Louis XVIII's government in 1816 then it would a socialist historian in France in the 1990s.

The preceding observations suggest the possibility of proposing a contextual definition of the artifact as follows:

> *An artifact is a physical object produced at some time in the past, and attesting to a given set of practices, thinking, and ways of viewing the world, but whose importance will be defined by present and foreseeable future needs and use. The value of the artifact is strongly influenced, but not completely determined by, the document/object's features that are unique.*

The artifact conveys historical consciousness in a number of different ways, depending on who studies it and for what purpose. Much of the information conveyed by an artifact does not require the presence of the physical object. Surrogates of the object (e.g., photographs, photocopies, and digital versions) may convey much of the information stored by the artifact. For some, perhaps many, purposes a high-quality surrogate may convey this information better than does the original. In many instances, the surrogate may enable access and use that would be impossible if we were dependent on the original. Access to objects that are remote and the ability to enhance images or perform full-text searches are among the uses that can render some difficult-to-use materials suddenly accessible. Surrogates do not obviate the need for some scholars to consult the object itself. However, there are many instances when a surrogate can reasonably serve scholarly needs as well as, sometimes better than, the artifact itself.

This is all by way of explaining that the artifact matters. It matters very much. Yet faced with the crisis in which artifacts are abundant and resources scarce, the scholarly and library communities urgently need to rethink the status of the artifact in terms of its content and its material form. Acknowledging that every aspect of an artifact yields information that will be of use to some scholar or other, we may need to assess the relative importance of the different aspects of an artifact pragmatically. Several issues need to be confronted collectively by scholars and library professionals.

First, within the timeframe of the last two hundred years, what constitutes an artifact worth retaining? The answer is not obvious in the case of nineteenth-century material artifacts: baseball programs or railway timetables have not traditionally tended to be viewed as important cultural documents, although they probably would be today. However, it becomes truly perplexing in the case of the electronic medium, where the concepts of original or unique, stable or fixed, may not even apply.

A second question concerns resources and priorities. This imperative may be spelled out as the "how, who, and when" of artifact preservation. Accepting the reality that resources for preservation are limited, and assuming some consensus on the nature of artifacts: how (in what form) are they to be preserved, by whom, and when (or how often)? In other words, are all libraries or archives to be held responsible for collecting and preserving the same categories of artifacts? How much redundancy of preservation is necessary and how much can we afford? The presence of redundant collections is an insurance policy for preserving and making accessible information in physical formats. However, this is untrue for digital information, which can be easily cloned and shipped around the globe almost instantaneously. In the case of digital information, redundancy may be very wasteful of scarce resources. If and when digital files become the default mode for access—even for materials that were originally physical artifacts--what are the implications for duplicative collections of physical artifacts—old runs of journals, embrittled monographs, and so on?

The issue is less to determine whether baseball programs and railway timetables from the nineteenth century, for example, are items of sufficient artifactual value to justify the expense of collecting and preserving them. It is rather one of setting priorities in the face of financial constraints that mean, practically speaking, that if one decides to collect and preserve one kind of artifact, there will be insufficient resources in a given library or archive for other kinds.

Nor is the issue to evaluate the artifact per se to determine what survives and what does not—the scholarly community has no more of a claim to the wisdom of the ages than does the library community. What is needed is to agree on a system, a method for interrogating the individual artifact that would, in a climate of finite resources, help make a good decision about whether and how to preserve it. Such a system would help assure survival of the greatest number of artifacts by intelligent analysis and classifications.

If the scholarly and library communities could reach consensus about matching preservation of specific kinds of artifacts to particular categories or kinds of repositories, it will be possible to rationalize on a national scale the task of artifact preservation.

There are few effective mechanisms available for creating guidelines or determining where the responsibilities fall for making decisions about retention, preservation, and the kinds of reformatting that might be deemed appropriate for a given artifact type. There have been initiatives that have brought together the scholarly, archival, and libraries communities to propose preservation and collection guidelines. The Commission on Preservation and Access convened scholars in the 1980s to identify brittle books to microfilm. More recently, in the 1990s, the American Historical Association, the Association of Research Libraries, and the Modern Language Association created a task force on the preservation of the artifact to document the preservation challenges and inform scholars about the need to collaborate with libraries to address those problems.[8] However, many of the collaborations between scholars and librarians have been either locally based or ad hoc, to address specific crises. None of the initiatives has proven to be sustainable, and none has developed mechanisms for long-term productive partnerships.

In 1999, the Council on Library Information Resources, with the encouragent of the American Council of Learned Societies and several foundations, created the Task Force on the Artifact in Library Collections to address precisely those issues that had not been adequately answered by the previous committees and task forces. One of the goals that the Task force on the Artifact in Library Collections has been to propose mechanisms for collaboration in the task of articulating preservation strategies that are realistic and sustainable, balancing the needs of present users with those of the future. As chair of the task force, I deemed that before we could hope to propose collaborative mechanisms for balancing use and preservation, we would have to propose a use-based definition of the artifact that would be, from the outset, correlated with the requirements and realities of preservation. Space constraints do not permit me to present the full extent of our thinking and recommendations here. I did want to share with you, however, the basis for our thinking. I hope to have succeeded.

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[8] The resulting report, *Preserving Research Collections*, was published in 1999. (Reed-Scott 1999).

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Technical data and Preservation needs

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Managing and preserving digital collections in order to guarantee long term access to researchers is, as it has always been with each new technology, both continuity in objectives and general organization of services and rupture in technical practices and staff skills requirements related to new technical needs. With the acquisition of digitally born resources which have no more analog equivalent and with the digitization of existing collections process, which is becoming a part of the preservation and conservation policies, the libraries are faced to a new preservation challenge. To ensure the long term usability of digital resources they will have to define and collect data that will be used by the preservation managers to take appropriate actions in order to maintain the bit stream which is constituting the digital object in a way that it can be rendered and interpreted whatever the technical changes in computing will be in the future. This situation is exactly the same for all the institutions that have custodial and memory missions for specific communities of users, sometimes keeping records for evidence purposes, and for which the information is already created and stored only in digital format since more then a decade. In all these communities the work for building such preservation metadata sets have been initiated most of them based on the OAIS (Open Archival Information System) standard and we are on the way of building a consensus within the Library community.

1 The new challenge of digital preservation

The preservation of a digital resource, just like the preservation of classical resources, need to preserve the technical mediation between an object and the information it contents. In the framework of what we have currently to preserve, the preservation of the physical medium, for instance a book, is the main task. Of course we know that sometimes we need also to keep some context knowledge if we want to make the content of the object understandable. We have the example of the Rosette Stone as a symbol of what is the difference between preserving the physical object and preserving the ability to interpret the language code recorded on the medium. We have also the more recent example of the audio analog material where we need a technical mediation through a device to transform a physical vibration into sound waves and for which the characteristics of the transformation changed over the time with the disappearance of devices replaced by incompatible new ones. In that case the preservation challenge was concentrated only on the medium preservation and the device obsolescence against which the action to undertake is maintaining devices as long as possible then migrate resources to new formats corresponding to actual devices.

The digital resource is introducing a more important dissociation between the medium and the content, which is impacting all the author right legislation and libraries organization based on the physical object and its medium type, like for instance legal deposit legislation in France, or the organization of manu library conservation services.
The preservation of the medium on which the libraries concentrated until the mid 90s in conjunction with the electronic off line publishing, is now more considered as a classical computing safeguard function as we have to refresh preventively all the medium according to a strict planning.
The technical obsolescence associated with the digital resources is happening faster then the medium aging. For instance The Word® text processor new versions are issued within the average of every 3 years and are directly compatible only with the previous version. The true challenge we know we are faced to is to understand and manage the complexity of the technical obsolescence of the content information from the bit stream to the usage of it through an application. We can decide either to emulate the obsolete complex technical environment or to migrate the resource, totally or partially, depending of what is considered as the content to be preserved. In practice we will certainly have to manage both solutions and for that purpose we need to record appropriate technical data as well as archival data which constitute the **Preservation metadata.**

1.1 The components of the digital content preservation

The content of digital resources has to be processed by a computer when it is used in order to render the bits stream understandable for the user. This process is composed of a chain of technical sub-processes creating a chain of technical constraints we need to document with metadata to be able to manage the preservation. All the sub-processes will not necessarily become obsolete at the same time but one element out of use will jeopardize the access to the content. We can analyze and represent this chain in a layered model where each layer is representing a sub-process that render a service to the next upper layer on which the following sub-process in the chain is operating. From the bottom to the upper layer we can distinguish the following sub-processes with the metadata type we need to create and store along with the resource:

- **Physical layer**

The digital resource is stored on a physical or a communication medium through a physical storage format, generally standardized (for instance ISO 9660 for a CD-ROM). It can be changed if we migrate the document on another medium for instance a DVD and we need to keep the information if we will have to provide the original format.
We have also to consider at the bottom of the chain some hardware device data in case of hardware physical dependency such as the need of extra devices (for instance a multimedia application using extra devices like MIDI audio applications). For the main hardware, the information is redundant with the operating system one.

- **Binary layer**

The bit stream is organized into labeled blocks that are medium independent. The operating system (name and version) which is managing the file system is providing the service and in many cases is implicitly including the file system but not always. Example Windows NT 4.0

- **Structure layer**

The bits are aggregated into primitive data structures to be manipulated by programs. In case of preserving non compiled software we need to keep the information about the interpreter or the compiler name and version that will be required to use it.

- **Object layer**

Data are structured into objects meaningful for the application and through it to the user. The object format can be an open format or a proprietary format. The objects are rendered by the application and in the preservation environment only the object format has to be known. Example: image in JPEG, HTML pages, MPEG…

- **Application layer**

The application software manipulates the objects of the previous layer and presents them to the user. The name and version of the application can be redundant with the object format. We can have a one to one correspondence (for instance PDF format and Acrobat reader), or many to one (for instance with the JPEG format where several viewing applications can be used). In other cases only the application is known and the proprietary object format it is using remains unknown (often in early CD ROM publications)

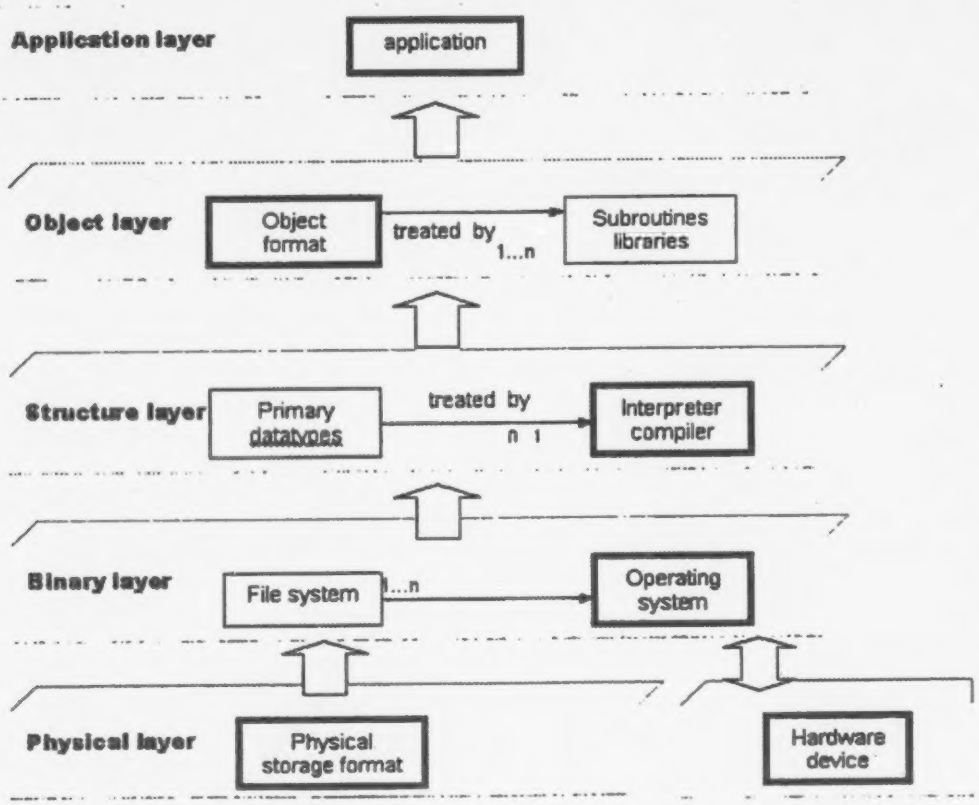
Application layer
application
Object layer
Object format
treated by
1...n
Subroutines libraries
Structure layer
Primary datatypes
treated by
n 1
Interpreter compiler
Binary layer
File system
1...n
Operating system
Physical layer
Physical storage format
Hardware device

Fig. 1. The layered information model (From NEDLIB Report 2. Fig6, p. 8)

1.2 The different technical types of digital resources

This analysis leads us to distinguish between two types of electronic resources that will not require the same type of preservation actions and will not need to be archived with the same preservation metadata:

- Electronic resources that are applications dependent of specific proprietary systems for which we need metadata on the Application (application layer) and on the Operating system (binary layer). They correspond generally to off-line CD-ROM publications where a specific application manipulates unknown formats. In this case the only access to the content is the proprietary application (for instance cdu.exe in the CD ROM of the *Encyclopaedia Universalis*)

- Electronic resources with known formats that are independent of specific systems. Here we need to retain metadata on the Object format (object layer) and possibly on the application as long as the library is obliged by contract to use the original application to access the data. This type of resources corresponds generally to Web resources. Obviously igitized documents created by the library in a documented known format should be archived independently of the current digital library applications as neutral contents.

We can see that the resources most difficult to preserve are the applications dependant of specific systems, which is the case of the offline publications with, protected controlled access through proprietary applications. At the moment the Web is more open but we have to follow up the technical evolution of the commercial Web and deep Web as it can become as proprietary as some off-line publications. The Library community has to make the publishers and the authors aware that they have to deposit more open applications using known documented standard formats in order to allow the long-term preservation of their publications.

2 The Preservation Metadata

Several metadata sets are defined associated with digital resources and focussing on specific functions. Functional categories usually associated with digital repositories are already defined such as:

- Descriptive metadata facilitating resource discovery and identification. They received the most attention from the library community as they can be seen as rather closed to cataloguing
- Administrative metadata supporting the resource management within a collection of digital resources
- Structural metadata which are binding together the components of complex digital resources

But such metadata are designed for a system supporting a digital library repository that allows users to search and browse through the digital collections. They are not designed for the preservation purpose, which is more associated with the functions of an archival repository.

A first attempt to define such metadata was made by several projects in the libraries and archives communities. For instance RLG (The Research Libraries Group) released in May 1998 a set of 16 recommended metadata elements considered as essential to be captured along with digital surrogates created by the libraries in their digitization projects. This early work has led to a work preparing a NISO standard on Technical Metadata for Digital Still Images. These different approaches are reflecting specific needs in specific domains and they have to be integrated into a general framework emphasizing the archival functional aspect and covering all the range of preservation needs of the library community.

The OAIS (Open Archive Information System) reference model, developed under the auspices of NASA's Consultative Committee for Space Data Systems (CCSDS), which is becoming an ISO international standard (ISO DIS/14721), is providing such a framework. It also provides a high-level information model that can be used for the metadata framework, including the preservation metadata. Several library projects already used the OAIS information model to develop preservation metadata sets.

2.1 The OAIS information model

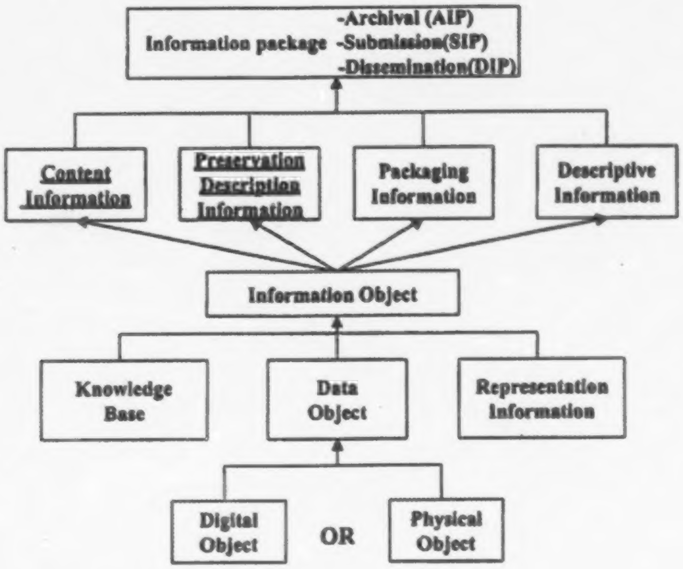
Information package
-Archival (AIP)
-Submission(SIP)
-Dissemination(DIP)
Content Information
Preservation Description Information
Packaging Information
Descriptive Information
Information Object
Knowledge Base
Data Object
Representation Information
Digital Object
OR
Physical Object

Fig.2. The OAIS Information Model (From OCLC/RLG White paper, Fig. 2, p. 12)

At the abstract level the OAIS Information Model is manipulating Information Objects. An *Information Object* is the meaningful information interpretation of a *Data Object* (a digital or a physical one) through the user's Knowledge Base and more importantly from the preservation point of view through the *Representation Information.*

Four classes of Information objects constitute the *Information Package* that the system ingests when receiving it (SIP), then stores in the archive (AIP) and delivers on demand to consumers (DIP). The information objects types are:

- The *Content Information* object, which is what has to be preserved. The definition of the Content Information is not obvious. For instance with on line journals it can be only the text and embedded

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images of the articles, or it can be the content and associated presentation for instance as PDF files for the articles. But for the same journal it can also be the full application that allows to search and retrieve and to browse through the full journal collection.

- The *Preservation Description Information* (PDI), which contains information necessary to manage the preservation of the Content Information
- The *Packaging Information*, which binds the Digital Object and its associated metadata into an Information Package
- The *Descriptive Information* which facilitates the access to the Content Information via the archive's search and retrieval tools

The Content Information and the Preservation Description Information are the two information objects classes essential for long term preservation and they are providing the framework for metadata sets creation.

The Content Information corresponding to a digital object has to be rendered through the *Representation Information* and we need Representation Information metadata for instance metadata on the Operating system name and version.

The OAIS model identifies four types of PDI for which preservation metadata have to be defined:

- The *Reference Information* that enumerates and describes the identifiers assigned to the content information
- The *Provenance Information* that documents the history of the content information
- The *Context Information* that documents the relationships of the content information to its environment
- The *Fixity Information* that documents the authentication mechanisms used to ensure that the content information has not been altered in an undocumented manner

2.2 State of the art of the preservation metadata development

OCLC and RLG announced, in March 2000, their commitment to collaborate on identifying and supporting best practices for the long-term retention of digital objects. One area of collaboration is the use of metadata to support the digital preservation process and they organized an international Working group on preservation metadata. The first work of this working group was to issue by January 2001 a White paper reviewing and comparing four metadata sets in order to prepare for a consensus building. Three of them can be mapped to the OAIS information model. They are :

- The National Library of Australia metadata set issued in 1999 developed within the PANDORA (Preserving and Accessing Networked Documentary Resources of Australia) project. The metadata are intended to support the preservation of both digitally born and digital surrogate objects.

- CEDARS (CURL Exemplar in Digital Archives) elaborated the metadata set in 2000. The CEDARS project is run by the universities of Leeds, Cambridge and Oxford in the UK. The metadata are covering the administrative, the technical and the legal information for the complete archival functions, including the preservation.

- NEDLIB (Networked European Deposit Library) published the metadata set by the end of 2000. NEDLIB project was leaded by the Royal Library of Netherlands and was gathering the National Archives of Netherlands, National Libraries of Finland, France, Germany, Italy in Firenze, Norway, Portugal, Switzerland. Publishers were also associated (Elsevier, Kluwers, Springer Verlag). The metadata were considered as the minimum mandatory for preservation management purposes in order to handle large amounts of data items when archiving off line and Web publications through a national deposit approach.

The fourth metadata set examined in the OCLC/RLG Working Group's white paper does not follow the OAIS information model. It is developed by Harvard University's Digital Repository Services. It demonstrates how XML structures can be used to encapsulate preservation metadata into the digital object when submitting it to repository.
This white paper is a basis for building a consensus on a standard for preservation metadata that corresponds to the library community requirements.

3 Conclusion

We can see that a lot of progress has been made during the last five years on the digital preservation of all the electronic resources a Library can have in its collections. The OAIS metadata framework is offering a good basis on which the library community can build its own standard on metadata not isolated from other communities. The work already done will allow for a library standard set in a rather short time. Nevertheless the fundamental question of the nature of the work to be done in order to create the preservation metadata is not solved. Some projects point of view is that they can be created during the cataloguing descriptive process by specialized cataloguers as technical data are already input in the MARC bibliographic descriptive records. From others it is a very technical matter more related with computing expertise and it should be very important to be able to create them automatically rather then manually. We have to continue to experiment the implementation of such metadata and assess their efficiency in the preservation process during several years. There is still a long way before us to guarantee the long term access to digital resources.

References

Reference model for an open archival information system (OAIS) Red book issue 1 / Consultative committee on space data systems. 1999. 140 p. http://www.ccsds.org/documents/pdf/CCSDS-650.0-R-1.pdf (visited 20/07/2001)

Preservation metadata for digital objects : a review of the state of the art / A white paper by the OCLC/RLG Working group on preservation metadata. January 31, 2001. 50 p. http://www.oclc.org/digitalpreservation/presmeta_wp.pdf (visited 20/07/2001)

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Preserving Digital collections

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Abstract:
In this paper Titia van der Werf discusses progress made in the newly emerging discipline of digital preservation. The discussion takes a deposit library perspective and demonstrates how specific application domains and specific material types have specific preservation management requirements. The author shows that, by contrast, IT-based technologies are not domain specific and that, when applying such technologies it is best to take a generic approach. She illustrates this with work done in the context of OAIS and NEDLIB. However she observes that digital preservation technologies are not mature enough yet to be implemented as standard solutions - but goes on to argue that this should the general aim of all communities involved and that the IT-industry should be triggered into this direction.

Introduction

Digital library collections rapidly grow to contain an ever increasing diversity of material - published and unpublished, commercially available, collected as institutional and personal donations, born-digital and digitised, distributed via offline media, hosted by third parties and captured from the web.
Does management of these collections require special effort and what issues are involved? In particular, what issues are involved when archiving and preserving digital collections? I have been asked to give you a review of the most current thinking on this subject, in as global a fashion as possible.

In this paper I will discuss progress made in the newly emerging discipline of digital preservation, drawing from the experience and insights gained during the NEDLIB project [1] and the local implementation of a digital deposit system at the Koninklijke Bibliotheek in the Netherlands [2]. I will also draw thankfully from fruitful interactions I have had in recent years with colleague institutions such as the British Library, the National Library of Australia, the Library of Congress, the Yale University Library, the National Archive of the Netherlands and others.

Digital preservation

Let me set the scene by clarifying the terminology used in this paper. Although the proposed title of my presentation was originally termed 'Archiving digital collections', I prefer to use the title 'Preserving digital collections'. The library and archiving communities often use these terms interchangeably to cover all aspects relating to long-term digital storage and preservation. The term archiving, however, as it originates from the computer sciences, is related to storage backup and maintenance processes without any real long-term preservation perspectives.

The subject matter of digital preservation is not mature enough yet, still it has become the talk of the day. Terms and concepts such as 'archival repositories' and 'digital libraries' proliferate. They are applied to any digital collection, regardless of the nature of the custodial institution. As different communities increasingly use the same terms in different ways, effective communication becomes difficult. Cross sector and cross-disciplinary approaches and the trend towards generalisation, do not always promote a better understanding of issues. Discussion of the value of the archival perspective for the digital library has led to academic speculation about concepts such as the 'authenticity' and 'reliability' of digital objects. Discussion of preservation issues concerning born-digital and digitised material is another potential pitfall. While born-digital content is depicted as fragile and prone to 'digital death', digitisation is heralded as a means to preserve content on paper and analogue media. The different management requirements for digitised collections and for born-digital collections contrast with their seemingly similar nature. A little untangling is needed here. I propose to do this by taking examples from the library perspective. I will demonstrate how specific application domains and specific material types have specific preservation management requirements. It is important to understand that, by contrast, IT-based technologies are not domain specific and that, when applying such technologies it is best to take a generic approach. I will illustrate this with work done in the context of OAIS [3] and NEDLIB. Finally it is important to realise that digital preservation technologies are not mature enough yet to be implemented as standard solutions - but that this should be our aim and that we should trigger the IT-industry into this direction.

Cross sector and cross disciplinary approaches

The technologies used for digital activities such as imaging, archiving and preservation are applicable to all sectors and disciplines, regardless of the specific nature of the application area. The technicalities of a scanning device, for example, its performance in terms of image resolution and compression, are equally relevant to digitisation programmes of libraries, archives and museums. Sharing expertise and knowledge at this level is rewarding, as can be witnessed by the success of handbooks such as Anne Kenney and Oya Rieger's work, 'Moving Theory into Practice: Digital Imaging for Libraries and Archives' [4]. This holds true for technological solutions proposed in the area of digital preservation as well, such as migration, conversion, emulation and encapsulation. The need to understand technical options, the advantage of implementing generic solutions and interoperable information systems and the prohibitive costs of implementing and managing IT- infrastructures are major drivers for collaborative efforts across all sectors and disciplines.

The need to investigate technical options and to integrate these with digital collection management practice has in turn triggered attempts to develop cross-disciplinary consensus on issues relating to digital collection management. Such issues span a wide range of perspectives such as appraisal strategies and selection criteria, document authenticity and intellectual integrity, collection description and finding aids, access rights and authorisation, etc. They focus on technological, legal, economic and organisational aspects. They are of concern to governmental, academic, commercial and cultural heritage sectors. They involve a wide array of stakeholders including libraries, archives, museums, historians, scholarly researchers, artists, authors, musicians, entertainment, news, audio/visual media producers, publishers, etc. As a result cross-sector, cross-disciplinary national consensus frameworks are being developed in order to enable institutions to implement digital technologies that apply as broadly as possible across all relevant disciplines and perspectives.

A good example is the 'little blue book', published by the UK National Preservation Office, entitled: Digital Culture: maximising the nation's investment [5]. Looking at the larger picture of managing digital preservation as a whole the booklet proposes to address the challenge by setting up organisational structures. It provides guidance and recommendations to identify the different stakeholders and their responsibilities, to determine preservation costs and funding strategies, to design an integrated policy framework that enables concerted action and a national implementation strategy.

Another example is the Preservation Management of Digital Materials Workbook, compiled by Maggie Jones and Neil Beagrie [6]. It gives a generalised overview of issues relating to digital collection management – targeted to a very broad audience from all sectors and disciplines. The issues associated with digital preservation are grouped in three broad categories: technological, organisational and legal.

Specific requirements for specific application domains

It remains the case that the specificity of historically grown disciplines and sector-bound practices defies attempts to formulate broad consensus frameworks and clear statements on issues surrounding digital collection management. For memory organisations with similar functions, drawing on each other's theory and practice may be rewarding, as advocated by Helen Tibbo in her short article, published in the digital libraries issue of *Communications of the ACM*: 'Archival perspectives on the emerging digital library' [7]. Yet, the difference in theoretical background and the divergence in practice underscore the distinctive features of similar organisations. To take Tibbo's example in the field of digital archiving, both archives and libraries have a task to select, describe, store and preserve digital material. These two different types of organisations have quite different perspectives on the kind of information that concern them, the forms in which this information is created and embodied, the uses to which this information is put, and consequently what is required to preserve it. Whereas archives collect unpublished and unique materials of institutional or personal origin with a focus on the records that document the creation, lifecycle and organisational context of the materials, libraries mainly collect published material, with a focus on wide scale availability of publications. These differences in perspective across the archival and library communities manifest themselves, for example, in different ideas of what it means for preserved information to be 'authentic' and 'valid' for its intended use. Within the archival world significant work, under the umbrella of the INTERPARES project [8], is underway to map evidentiary requirements and principles to electronic records and to explore digital technologies that can support such requirements. In the library world no such discussion has taken place yet, because traditionally authenticity of published material is no real issue. However, the relative ease with which it is possible to alter informational content in a digital environment, compared to the paper environment, has introduced the concepts of authenticity and intellectual integrity in the library community, as well.

Preservation starting points for deposit libraries

Deposit libraries with a task to guarantee last-resort access to all published material produced in their own country, are challenged by possibilities and restrictions of preservation technologies. Computer scientists and IT-consultants encourage them to make their preservation requirements and authenticity principles more explicit. In his interactions with deposit librarians, Jeff Rothenberg has distilled the following authenticity principles [9], which still need verification within the community:

- a preserved publication should be as much like its original published form as possible,
- a preserved publication should retain content, behaviour, functionality and look-and-feel of the original publication as much as possible,

- applying preservation techniques should not lead to re-publishing or reformatting of the original publication (no creation process).

The long-term preservation study being carried out by IBM-Netherlands as part of the implementation of the deposit system for electronic publications at the Koninklijke Bibliotheek [3], looks at authenticity principles as well.

A starting point that is felt to be important in this respect is that the preserved deposit copy needs only to be viewed in a document reader environment as opposed to edited and re-used in a document processing environment. This principle conforms to the way in which publishers make their publications available. If publishers do provide processing functionality, in exceptional cases, the deposit library should also try to make future re-use of data possible. This general starting point reduces the required functionality of a preserved publication significantly, thereby simplifying technical preservation solutions. It should be noted that this authenticity principle is very specific for the deposit regime of electronic publications, and does not necessarily apply to other memory institutions such as data archives – where reusability of content is a top one requirement. It shows how authenticity principles can vary according to the institutional mission and how dangerous it is to try and generalise preservation and authenticity requirements into broadly applicable consensus frameworks across all sectors and disciplines.

Another starting point, related to the previous one, is that the publisher's dissemination environment, with features such as graphic design, branding and advanced searching capabilities, is not considered to form intrinsic part of the deposited publication. In other words the deposit copy is considered as an autonomous published entity that should be definable and identifiable outside its dissemination context as well. This allows deposited publications to be archived in a separate deposit environment with its own searching functionality supporting deposit collection uses. The usefulness of the distinction between content and functionality, enabling the separate development of value-added functionality for dissemination purposes and for archival purposes, was also highlighted by the Yale University Library and Elsevier Science, in their proposed approach for a collaborative project funded by the Andrew W. Mellon Foundation [10]. This project is a showcase for close publisher-library interaction with a view to foster long-term access to digital publications. It also shows that institutional roles and responsibilities in the digital environment are not converging or merging. Publishers and libraries are reassessing their complementary capabilities and expertise and in doing so they reaffirm their traditional institutional mission. They do not interfere with but respect each other's institutional imperatives. This approach differs somewhat from ideas developed in the archival community where it is expected that digital preservation requirements need to be integrated with the creation process, in other words preservation decisions have impact on the way in which the material is created, described and stored. This may be a very legitimate standpoint from an archival perspective, but for deposit libraries it is unthinkable to impose their requirements on the business process of publishers.

Distinguishing between dissemination and preservation environments raises the issue what to do about web archiving. Web archiving has grown to mean harvesting and preserving web pages from the Internet, with the aim to safeguard the web and its history for future generations. In how far can and should web pages be preserved in their dissemination context? How can we define and delimit web publications for preservation purposes? Are web sites to be considered as publications in their own right or are they publisher dissemination environments? Should a web archive support hyperlinks across web publications, should it provide web search engine functionality? Should it reflect the functionality of the web as it develops over time?

A starting point taken by the Koninklijke Bibliotheek on these issues, again as part of the long-term preservation study carried out by IBM-Netherlands, is that web archiving has a different aim than the deposit of electronic publications. While web publications can and should be part of the deposit collection, web archiving is out of scope because it also aims to keep the dissemination environment of publishers. The deposit library needs to agree with web publishers what publications fall under the deposit regime and procedures for deposit. This standpoint is strengthened by several observations [11]:

- 80% of the web content originates from 20% of the total number of web sites
- increasingly, web content cannot be harvested because of dynamic database publishing practices
- institutions that do web archiving have been confronted with legal complications such as copyright and access restrictions imposed by web publishers

These observations suggest strongly that it is maybe feasible and wiser to come to deposit agreements with web publishers directly - as has been the practice with conventional publishers.

Preserving born-digital and digitised material

In the little blue book from the NPO mentioned earlier, it is stressed that massive investments are made in digitisation and 'that a great deal of money can be wasted if digitisation projects are undertaken without due regard to the long-term preservation of the digital files.' This standpoint can be found in much of the literature on digitisation. As I have stated earlier in the book review column of *Alexandria [12]*, this standpoint does not reflect the complexities involved in the decision making process concerning investments in digitisation versus investments in long-term preservation. Both are costly but mostly incompatible undertakings. By tackling both the preservation of digitised heritage and the preservation of born-digital heritage in one, this approach confuses the different issues at stake. This was also one of the conclusions of the NEDLIB project, which from the start scoped its attention to the long-term preservation of born-digital material only.

Firstly digitisation usually concerns material that exists in paper-based form or whatever other physical form, whereby the digital version is not the object of preservation but just a surrogate that is more appropriate for dissemination. Only in the few instances where the original object is in a far state of deterioration, is digitisation used as a means of preservation.

Secondly the issue of authenticity is not as relevant for digital versions of physical originals as it is for born-digital originals. Whilst one would want to safeguard the born-digital original, one would prefer to upgrade the quality of the scanned versions of physical objects if it were possible. Digitisation is primarily a means of making physical and site-bound material more accessible to a wider audience. In view of the fast changing imaging technology with ever-increasing resolution quality, compression capabilities and automatic pattern recognition possibilities, the aim to preserve digitised files for the long-term seems futile. Digitisation is a welcome means of exploiting the physical collections of memory organisations. It seems however not very appropriate to create large high-resolution archive files consuming terabytes of storage capacity where more economic sized presentation files will do the job. A more thorough argumentation and discussion of these very important issues are missing in current studies on digitisation.

Transition from specific user requirements to generic IT-solutions

In the previous passages I have stressed the importance to specify preservation requirements according to institutional aims and activity areas. It is important to understand that, by contrast, IT-based technologies are not domain specific and that, when applying such technologies it is best to take a generic approach and to look for globally applicable solutions. I will illustrate this with work done in the context of OAIS and NEDLIB. In this context a model for the implementation of an archive system has been developed, based on the general requirement to realise a storage- and access system for digital collections. The data model and functions are designed with a view to accommodate all types of material and to perform all basic processes required by an archive. In this sense the model can be implemented for any application area, be it spatial data archives, deposit libraries or national archives. The OAIS concept of self-contained information packages (SIP, AIP, DIP) are at the base of the information model and are handled in a generic way by the system, regardless of the content they carry. The functions Ingest, Data-Management, Archival Storage, Administration, Preservation and Access are basic and cater to a fully functional system, regardless of its operational environment. It will be at the system configuration level that specific implementations cater to specific user requirements. At this level the deposit library or the spatial agency will need to define what the content information unit of the archival information package will be, for

example, a deposit copy of an electronic publication or a data set from a space observation mission. During the European tendering procedure soliciting IT-vendors to make an offer for an OAIS-based deposit system, the Koninklijke Bibliotheek concluded that the realisation of such a system by use of existing technologies and standards was feasible, but that the preservation functionality request was too premature. There are no ready to implement technologies and solutions for digital preservation.
Johan Steenbakkers envisions a ubiquitous preservation function which he has depicted, during the NEDLIB workshop in December 2000, as follows [13]: "Suppose you need a digital article or picture produced in the year 2002. The article or picture was stored as a bitstream at the time, using a special software utility called *omega*. You click on the omega file containing the necessary preservation metadata. Via the omega metadata the correct decoding mechanism for the original bitstream is provided by the archive as a plug-in and there you are: within seconds you can read the original article or view the original picture."
He has challenged the IT-industry to work towards such a standard ubiquitous solution. It seems the IT-industry is willing to take up the challenge, but it will require a lot more fine tuning of preservation requirements and refined discussion, research and experimentation with preservation techniques. Because behind the vision of the magic omega button lies a whole world of rights and access management, of technical, administrative and preservation metadata exchanges, of migration and recreation techniques - which we have only begun to sketch in bold lines. Welcome to the fascinating world of digital preservation!

Notes

1. NEDLIB was a very successful European deposit library collaborative effort. See NEDLIB project home page: www.kb.nl/nedlib/
2. The Koninklijke Bibliotheek is implementing a deposit system for electronic publications, together with IBM, Netherlands. See DNEP project home page: www.kb.nl/dnep-project/
3. Reference Model for an Open Archival Information System (OAIS). See http://ssdoo.gsfc.nasa.gov/nost/isoas/ref_model.html
4. Anne Kenney and Oya Rieger, 'Moving Theory into Practice: Digital Imaging for Libraries and Archives'. RLG (California, 2000).
5. Ed. Mary Feeney, 'Digital Culture: maximising the nation's investment. A synthesis of JISC/NPO studies on the preservation of electronic materials'. NPO, British Library Board, 1999.
6. Maggie Jones and Neil Beagrie, 'Preservation Management of Digital Materials Workbook'. Pre-publication draft, October 2000. http://www.jisc.ac.uk/dner/preservation/workbook/.
7. Helen Tibbo , 'Archival perspectives on the emerging digital library' in: Communications of the ACM. May 20001.
8. International project on Permanent Authentic Records in Electronic Systems (INTERPARES); www.interpares.org.
9. Taken from a presentation given by Jeff Rothenberg during a Digital Preservation conference organised by the Helsinki University Library on April 23 rd, 2001.
10. See Proposal for a digital preservation collaboration between the Yale University Library and Elsevier Science. Version 4. Date: 30 September 2000.
11. These observations are based on an analysis of NEDLIB Harvester testing results from different national library sites.
12. See Alexandria, March 2001.
13. Johan Steenbakkers, 'NEDLIB Guidelines: setting up a deposit system for electronic publications', presentation held at the NEDLIB workshop. December 2000. www.kb.nl/nedlib/workshop/

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How to formulate the photographic question: a context for architectural and topographical photographs in England

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Abstract:

This paper provides an overview of the problems found by both professional and amateur users of archives and libraries who need to be able to phrase specific questions in conventional and online forms. It discusses issues within the context of a national archive holding over 10 million photographs and is concerned with the varying roles of not only those individuals who produced images but also their archival histories. The exploration and interpretation of the lineage of all image producers indicates the need not only to look at the original intentions of photographers but also at their increasing biographical obscurity: without these two facets photographs are in danger of becoming digital fodder without any history of their own.

I feel that I am very appropriately speaking to you but I could equally be speaking to a conference of Archivists or Curators or Architectural Historians or Historians of Photography. If one defines an Archivist as being one who is mainly concerned with written records then I am none of these - yet they all impinge. Perhaps the best term is Visual Archivist - but these senses by which we define Archivist are important to my argument which is that many of those responsible for visual records cannot see. The alternative and shorter title here might be The Invisibility of Images. I deal with any visual image, usually photographic but including some drawn or measured plans which relate to the remit of a national heritage organization, English

Heritage, which is concerned with all aspects of the historic environment: breadth as well as access to specialised research resources are necessary to encompass this.

These may be blunt and generalized statements which almost certainly require qualification or even correction: I know they do not even universally apply in England quite apart from the USA – but I am equally sure that in the USA photography has much more established and respectable academic credentials and, more importantly, much bigger set of professionals whose concern is purely photographic. In England such expertise devolves to Librarians, Curators and Archivists whose main concerns relate to a whole range of media: objects, written or printed material, fine art…yet at the same time they are also the people responsible for as yet largely ill-defined photographic collections. My concern is that insufficient interdisciplinary training means that the most prevalent visual medium for the last 150 years is the very medium which is given the least resources for our successors to interpret. It is of course impossible to suggest that every single image and photographer could be defined in some hypothetical Doomsday Book: selectivity is absolutely essential yet there would appear to be an inexplicably vast difference between the application of full cataloguing and the creation of simple handlists of photographic holdings. In England no bibliography of collections or photographers exists beyond now out of date sources. The creation of a simple database mainly relating to photography can begin to allow a contextual overview for an heretofore absent or hidden facet of visual interpretation: the reclamation of role and the interplay between such roles in photography and associated areas.

This data relates to non-photographic as well as purely photographic data: in a national heritage context it is necessary to broaden data to include associated roles: that is, architects, designers, engravers, draughtsmen, etc. Furthermore in a very large archive it is also desirable to make entries for anticipated holdings even where no example is known since even if no actual examples are ever found this data will still provide a context: it relates to the understanding of the archive. This Signposting function is vital not only to interpret the collection in question but also to aid those users who need to know where else to go. No large collection exists in isolation.

The simple database is only a tool to allow manoeuvring within many other highly specialized retrieval aids - it does not attempt to replace sophisticated catalogues whether in digital or conventional form. It is perhaps high-level metadata which allows a multiplicity of functions – and is perhaps applicable to the complex world within which we operate. I am a generalist within a large institution of specialists – I know where one might find an expert and can aid assessment processes whereby one gains a quick overview of whether that institution holds any material: this informs acquisition, documentation [including copyright] and indeed deaccession processes.

The core of most architectural photographic archives relates to four factors: Fame or Date or Event or Place. Thus much image retrieval relates to the earliest known image, the fame of a person or designer, the associated events and with the topographical location. Most collections are only accessible by a simple location systems. Furthermore any biographical retrieval is entirely dependent on the fame of the photographer – within the vast field of architectural and topographical photography of course only a few are famous practitioners. The absence of adequate retrieval aids to ordinary architects or designers and to the many sites which are not endowed with a famous event is compounded by a very selective set of known biographical sources for photographers.

Thus the natural bias in archives is towards those items associated with Fame and Event but it is also to avoiding 'impure' processes such as mechanical photographic processes like postcards. I do not know of the development of US research but in the UK postcard collecting tends to preclude the study of roles and be biased in favour of the subject. Similarly the definition of printing history tends towards 'art' processes or line illustrations even though the same companies often also produced postcards and other 'impure' mechanical processes. We need to be aware of the convergence of several strands of study if we are to understand the broad nature of "views" held by a large archive: this means that the history of photography is complemented by all aspects of printing history and some familiarity with private collecting pursuits.

Photographic archives can include a continuum of expertise from the professional to the amateur and curators need to be able to embrace the same continuum: much of the visual data is mundane but that does not mean that there should be less attention paid to "merely" amateur or commercial production: too much concentration on professional fame can lead to an imbalance: in one town the well-known professional photographer we can now see to be eclipsed by an amateur with vision whose negatives no longer survive.

Thus a Seamless approach is required: one which looks not only at the history of photography but also at the associated histories of related subjects or themes. Unlike the USA, photography in England has not attained the same status in society. Collectors are few and institutions ability to focus on it is narrow – early history, famous practitioners etc. This absence of perceived status exists despite the existence of huge hunger for visual resources which are however largely inaccessible and often cannot be properly interpreted.

This paper suggest that at least in the UK there is a need for photographic data and interpretation, that such data is not available through most libraries and archives.It is predicated on experience with the architectural holdings of a national archive: the National Monuments Record [NMR] is the public archive of English Heritage the principal governmental agency responsible for many facets of the historic environment - the United States equivalent might be the combination of the US Park Service plus Historic American Buildings Survey plus some state archival functions relating to the maintenance, conservation and interpretation of archaeological sites, historic buildings and landscape.

When I say that there is no photo data that can be fed into the heritage knowledge base I overstate: obviously such resources do exist but my point here is that the access to and availability of the very photographic tools which can aid heritage interpretation themselves require interpretation, development and funding. So one of the main points here is to bring to attention how one would go about trying to pinpoint and locate data and to alert librarians about how with limited resources one might begin to tackle the problem of making accessible images which lurk in the basement – yet another alternative title might be The Archival Iceberg: Tackling the Submerged Nine-Tenths. Now, of course you here in dynamic America may not have this bulky backlog of sheer information; perhaps England like Italy is overburdened with history – but I suspect I am describing an internal tendency for photography to fall into the sphere of archivists and librarians, who, unless their institution is mainly concerned with 'modern' images, find that photo collections fare less well in the funding and prioritisation stakes. I am suggesting that the efforts required to store, interpret and make available the traditional archival media [documents etc] mean that photography is not accorded, at least in England, the proper intellectual scrutiny. I also suggest that indiscriminate application of digital solutions may actually reduce further our ability to interpret the past. However, the internet dissemination of high-level descriptions of photo collections by providing a context to local and national holdings, is I suggest, a better application of technology. This would allow a context for appropriate digitisation programmes.

As you may have guessed I am talking here about our common enemy: overlap and duplication. Perhaps we are also creating another enemy: complication. The problems even with conventional photographic media are legion but the long-term effect of over-layering yet another seductively simple access to the visual world – digitisation – has the same effect on me as Nicholson Baker's comments on, what in America can only be called, the conspiracy to get rid of index cards. Even if digitisation of images includes all conventional indexes daybooks and captioning [which is a doubtful premiss] we keepers of knowledge will be confronted by several future worries:

One: Are we able to keep re-investing in equipment to re-write and maintain what is in effect a sexy but short-term set of our 'best' collections or images?
Two: Are we assuming all conventional photographs will be digitised? If so I would be glad to hear more from by technical and business colleagues regarding this which must be the mother of all those metaphysical things called the 'Modern Project' – or is this total digital capturing actually quite simple if sufficient resources are applied? Three: If only a selection of images are to be digitised such an invidious process raises a whole set of further questions: Who selects? Who selects the selectors? What are the criteria? To what degree is original provenance and caption included with a digitised image? What is the long-term effect of partial digitising on the remaining uncaptured rump of conventional materials? We already have a residue in our basements of that which for various reasons was not considered important enough to print: will this material be catalogued and digitised?

These questions arise from curating and making available very large conventional photo collections and certainly do not apply to small or medium-sized holdings where I would be inclined to digitise every last scrap: every unidentified fuzzy duplicate remnant along with every piece of documentation can quite easily be captured and has to be captured – for if you do not, who is going to curate what can only be described as the closest thing to archival garbage? By this I mean the discarded appendix of a collection where decisions have been made regarding the relevant content.

Being archives we are well aware that designating material as secondary or as garbage is dangerously subjective and that a later generation [or, if one has worked in an archive for a long time, a wiser version of oneself] our successors may well find such scraps worthy of subsequent re-appraisal. So, going back to the problem of larger collections I would argue that sheer size begets humility: certain ARCHIVAL LAWS can perhaps be propounded:

1. Eternal Recurrence: Nietzsche's concept is alive and well – all things will archivally re-occur, all criteria, all questions and enquiries will inevitably reappear again.

2. Garbage Theory applies: low-priority collections and material for de-accessioning are precisely that part of any collection requiring attention.

3. KISS: Keep it Simple Stupid. Complexity and multiplication of data is endemic: users need a simple overview of holdings whether in conventional or digital form.

4. Input Now – how many staff in your institution are encouraged to add new data as it passes before them or whose duty specifically relates to noting the existence or the upgrading of data as it is used?

5. Make 'Virtual Accessions': Pre-emptively enter data: it is quite possible [if not soon desirable] to create entries which will mean that contextual data can be anticipated whether or not you actually hold the item in question.

6. Entropy Management Is Our Business: we need the sort of depth and vision used by astronomers to adequately navigate though our mini-universes.

Many planets and stars are better defined than our own storage spaces.

7. Documentation and Reference Sources are Your Gods - but God Does Not

Exist. That is now two Nietzschean references – he is obviously the philosopher for Photographic Archivists or Curators.

Thus the proposition is that a simple contextual overview of all holdings, all roles can be created. That this will feed the constant desire for the prioritisation necessary for digitisation, cataloguing and conservation – and , indeed, for acquisitions and the little matter of copyright. This simple database means that links across a wide variety of associated heritage fields can be made, that the beginnings of national and even international knowledge of creators or roles is possible. To be viable any photographic archive has to be able to internally navigate through its holdings if it is to properly perform its archival role: such a contextual knowledge allows photography to enter and interact with the much better defined cultural and material worlds and enable us to see whole.

[This paper is based on an essay in the **London Topographical Record** 2001 entitled "Amateurs, Antiquarians and Tradesmen: A Context for Photographic History in London" where there is more detail regarding some of these issues]

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Graphic resources in the Spanish Art Libraries

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Abstract:

The interest for graphic information is increased explosively and explored through various communication networks like Internet and the audiovisual Media. The art libraries, museums, cultural centers and art foundations manage and store a lot of images in several departments and in different supports as printed paper or digital supports. In our paper will try to show the way we can catalogue this special material that vary from one institution to other to serve user's need and to conserve the original graphic material.

In spite of the great variety of formats we will try to show the way we the different formats for description and indexing can be compatible to make easer the access to the graphic information and to establish the links to digital graphic supports, just to achieve a precise information for user's needs

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HISTORICAL INTRODUCTION

The art needs for its knowledge, understanding and study of a series of graphic materials that reproduce the works in the possible most reliable way with respect to its original. These representations can be done in a manual or mechanics. In our libraries we find different supports that reproduce graphic materials as photographs, postcards, microfilms, microforms cd-rom and more recently the digital images that have change the traditional way of retrieval.

SPECIALIZED CENTERS FOR THE CONSERVATION OF GRAPHIC MATERIALS IN SPAIN LIBRARIES

The great majority of the catalogues of the Spanish art libraries are rich in these graphic materials and they include all kind of non books materials as we can check in the published guides[1] that describe their collections and the access requirement. Most of them are automated according to the international cataloguing rules, and the use the MARC format too but this only on regards to books, because other material like postcards and photographs are not yet automated. Regarding the photographs, both negative or positive, and the pictures that form part of a documentation, they are held not only in libraries, but in many other institutions, and at the present time, still exist some difficulties to access to retrieval this kind of materials because frequently this kind of material is not catalogued.

ARCHIVES

Regarding the archives that store important photographic collections, they can form a indivisible part of a written documentation or just only collections of individual pictures of great interest to the study of the history of the art, there are not specialized guides as those of the libraries, that can guide the users to know the collections of this material. However, an abundant bibliography exist that describe a particular part of the collection, as well as the topics that it concern, especially the clerks of the administration so much central, autonomous or municipal according to the current configuration of the Spanish State.

The most of the Spanish museums, have their special departments with important collections of graphic materials as the Museu National d'Art of Catalunya, of Barcelona. It has as objective to gather a collection on the photographic creation in Catalonia, so much historical as experimental and about vanguard just to pursue the goal to make the inventory and the restoration of all kind of graphic information to allow its study and diffusion. This material has been digitized a small bottom, that referred to the exhibitions made in the own Museum, but now there is no more budget to continue the process of digitisation There is also a service of attention to the public in which the reproduction of slides, ektachromes of the works of the Museum is facilitated. This service is not digitized neither.

The Instituto del Patrimonio Histórico Español has too an important photographic and postcards collections of great importance to know the history of the Spanish art. One of the most important and well know is the Archivo Ruiz Vernacci with Laurent's more outstanding collections like Lacoste, Roig, Portugal and Ruiz Vernacci specialized in pictures from the collections of Spanish museums, views of monuments and popular characters that it includes about 40.000 negatives from 1860-1950. Other important collection preserved at the Instituto del Patrimonio Histórico Español are The Archivo Moreno, specially dedicated to works of art of the first half of the XX century, the collection of the restored works, understands all the works of art restored at the Institute, and the collection about the objects of Spanish art that were conserved in different museums and institution during the Spanish Civil War, just to preserve them from the bombs. There is also the Villanueva collection formed by pictures of the county of Burgos, specially the important gothic cathedral. All pictures of this collection are dated from the final of the XIX century. At the present time it has been partially digitized the Archivo Ruiz Vernacci and of the Archivo Moreno but they are not catalogued and indexed.

Among the archives of private Institutions we must mention the Institute Ametller of Hispanic Art. It is also necessary to refer the collection of graphic resources of the press agencies, newspapers, television but their access to this information is not for public.

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[1] Guía de bibliotecas de arte de Madrid, Madrid, Ayuntamiento de Madrid, 1999. The first edition of thid guide was published in 1989, and in may will appear a new guide of the art libraries in Galicia. Other Spanish art libraries can be consulted in the IFLA directory.

This situation that we can find in Spain with regard to the automated catalogues of graphic information and the dispersion of it in different institutions is very similar to the rest of the European countries. According to a study carried out by the European Commission for the Conservation and the Access to the documentation, 50% of the picture collections is conserved in archives, 30% in libraries, 5% in museums, and the rest in different institutions like societies, archives/museums or libraries/archives[2].

ACCESS TO THE GRAPHIC INFORMATION IN THE LIBRARIES, FILES AND SPECIALIZED CENTERS IN SPAIN CATALOGUING

At the present time, in Spain, we can say that most of the specialized libraries also has automated their catalogues using the MARC format for the bibliographical description as it is the case of the great majority institutions that dependent of the Central or Autonomous Administration. However the most of these automated catalogues are not available in Internet. These automated catalogues include books and non books material, specially, videos, microfiches and cd-rom, but not the graphic information. At the library of the Instituto del Patrimonio Histórico Español, there is a manual catalogue that includes all graphic information published in the old periodicals and the information can be retrieval by subject commonly artist or place. The bibliographical description is quite simple, and its includes only a brief description of the image, and the periodical that published it. So there is a lot of work to do if we want to automated this kind of information and to add the image to the catalogue.
On cataloguing an image it is very important to full in deep the T505 of the MARC format with the description of the image just to provide a complete description to the users.

Regarding the archives, the great majority of them do not have automated their catalogues to consent to allow access to that information, and the descriptions of the same ones are usually general and not adapted to compatible international standards. It is frequent that many public and private archives and institutions begin to digitize their collections to conserve them[3]but they do not catalogue the collection.

CLASSIFICATION AND INDEXING

We must assign different terms to the image that make easy the research and the retrieval of the information that the image represents.

In our country, exists a bigger variety of controlled vocabulary used by different libraries and archives, elaborated by the own institution, but there is not and official subject heading for special libraries[4].

The classification and indexing of image is quite difficult because it contains a lot of variety information that can be of interest to different kind of researchers. We must first identify the image and afterwards describe any element that it contain according to a controlled vocabulary.

How are we able to it favors the access to the users to this type of information, more and more requested in our libraries?

DIGITISATION

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[2] Klijn, Edwin.Lusenet, Yola de. In the picture. Preservation and digitalisation of European photographic collections. Amsterdam, European Commission on Preservation and Access, 2000 p. 8.
[3] Klijn, Edwin. Op. cit. P.48-49.
[4] Thesauro del patrimonio histórico andaluz. Sevilla, Instituto Andaluz del Patrimonio Histórico, 1998. Another one. Lista de encabezamientos de materia en las bibliotecas del C.S.I.C.2ª ed. Madrid, C.S.I.C., 1995.

The current printed publications are subjected to the copyright laws , and so they are not susceptible to be digitized, and its is difficult to access to this kind of information. At the library of the IPHE we done an exhaustive indexing of those publications that we consider they have a special interest for their graphic information,, we want to point out the collective exhibitions catalogues that join information about different artists. They are indexed in deep because we describe every picture that appears in the catalogue in the label T600as author/title to retrieval any works that are included in the catalogue, or we do content notes to allow the access to a better information. The library is involved now in a new project of cataloguing and indexing printed poster photographs. They are described according to ISBD (non book materials) and we establish and indexing in a depth requires. We make an hyperlink too in the field T856 of the MARC format to see the digital photograph that is recorded in JPG format.

If the library decides to establish a program for digitisation to preserve the old collection it is very important to draw a digitisation politics based in several points.
The approaches in which this digitisation should be based should be:

- The cost of the hardware
- Selection of the materials to digitize with the purpose of:
- To preserve the collections, especially if they are series of the XIX century that usually have a paper of low quality, a format in some excessively big occasions and that they suffer deterioration with the use and with the so much photocopy of the text like of the images.
- To allow the access to the graphic information stored in our institutions.
- To settle down during the digitisation some access like title or any other keyword to establish hyperlinks with our automated catalogue.
- It is necessary to fixe the procedure for digitisation as well as the level of the compressed files that depend on the quality of the image we want to offer, in such a way we can choose a JPG format for high resolution image or TIFF for the less. Many libraries have both, the first to sell and to offer a better information and the second one just only for consulting.

Regarding the cataloguing and the indexing tasks concerning the graphic material, we believe according to our experience, that this material if do not form part to any other kind of documentation, it must be cataloguing and indexing according to the Non Book Material Rules and must be automated in the MARC format, because this format admits different cataloguing levels, from a simple level like data referred to the author and title of the work to other more complex like the bibliographical references when the picture has been reproduced, compiled in the field T510, and to establish the hyperlinks to retrieval the digital image as we have said before an it is very useful in information exchange.

CONCLUSIONS

In our libraries exists an important graphic information contained in different supports, printed or digital that at the present time it is difficult to retrieval because there are not sufficiently exhaustive catalogues that describe these graphic representations.

In the most of the cases the access to the graphic information is conditioned to a politics of conservation of the own bibliographical and documental collection. These conservation politics at the present time, are joined to the digitisation of the documents, but this digitisation must be done according to specific goals to retrieval the document later on, organizing the files of images in disk in a hierarchical way, the concise denomination of the images, and the description of the same ones the most exhaustive way using the established standards for description of non book material (MARC: http://lcweb.loc.gov/marc/) or the description for archives materials EAD (Encoded Archival Description; http://lcweb.loc.gov/ead) not only to the homogenization of the descriptions, but also the exchange of information among institutions and of course to make the graphic material more accessible.

It is also necessary to remark that graphic materials of the art libraries are one of the pillars of the information requested[5] nowadays in the field of the art investigations, and therefore, the libraries must create their own banks of images to continue offering our services to the users, to allow the access to the information and to disclose the peculiarities and distinctive features of our art like manifestation of our own culture and history.

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[5] Cover, la nueva empresa de Microsoft distribuirá 65 millones de imágenes. El País, 22 de marzo de 2001 p. 23.

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Teaching students the art of retrieving architectural information

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Abstract:

This paper looks at the programme for educating architecture students at Queen's University in the art of information retrieval. The development of the programme through the undergraduate to postgraduate years is outlined. Particular emphasis is paid to the role the librarian plays in the 1st year project to research, and produce a model of, a seminal building and to the development of PADDI (Planning and Architecture Design Database Ireland) as a teaching tool for researching local architecture. The impact on library management is examined in relation to effective deployment of decreasing staff resources in the face of increasing student numbers; the raising of the profile of library staff within the Faculty; the more focussed allocation of budgets through involvement with course planning; and the development of new services arising from an improved awareness of student needs.

Introduction

There has been much debate in the UK during the last decade on the topic of architectural education and the professional institute, the Royal Institute of British Architects, has published a major report on the topic[1]. The main issues under discussion relate to the length of the course, the balance between training professional architects and teaching general degrees in architecture and the core skills that should be taught. It is the last of these issues which is the concern of information professionals in general and this paper in particular.

There appears to be general consensus that architects need design, technical and interpersonal skills. Bryan Lawson[2], an external examiner at Queen's who has written widely on the design process, says that many forms of design deal with "both precise and vague ideas, call for systematic and chaotic thinking, need both imaginative thought and mechanical calculation." Observations on the nature of design have shown also that architects are heavily dependent on design concepts used to solve problems in the past when they come to solving problems they are currently facing. It follows, therefore, that they must learn to source and evaluate key precedent studies and retrieve information to stimulate and inspire as well as to provide specific detail to solve particular architectural problems. Like all other professionals, architects increasingly have to find their way through a vast morass of information and they need to know how to use the wide range of tools now available to retrieve such information. Nicol and Pilling[3] in their recent book on architectural education and the changing nature of the profession, point out that architects "need expertise in accessing, identifying, evaluating and prioritising information." These are core skills that librarians should be instrumental in instilling.

There are two other major factors that impact on the need to teach architecture students how to retrieve information, and not just any information but material that is both relevant and of a high quality. The first of these factors is the increasing number of students in the UK being enrolled on architecture courses. In this we are just following a trend already well established in the rest of Europe. Ten years ago at Queen's, admittedly a small School of Architecture by UK standards, the total number of students enrolled in the undergraduate and postgraduate courses was 135 which is close to the number enrolled in the first undergraduate year in the current academic session. The total number of students enrolled in 2000/2001 was 315 and this number is set to increase. Even if library staff wanted to spoon-feed students it would not be possible. It is imperative that students learn to help themselves. Indeed learning seems to be the main buzzword in educational circles these days. Nicol and Pilling[3] stress that students need to be led "from dependence to independence in learning." So self-help is not only necessary but also desirable.

User education at the School of Architecture Queen's University

The user education programme for architecture students at Queen's University is carefully structured and is very much a collaborative effort between library and academic staff. The programme is designed to ensure that students see information skills as relevant to current and future projects and to the work environment. An important consideration in planning the course is that the skills taught should be applied soon after they have been introduced so that students retain and adopt them.

Table 1 User Education Programme: QUB School of Architecture

Year of course	Title	Content
1st Year UG	Design & Communication 1: introduction to library	Opening hours Loan periods Locations Catalogue Help desks
1st Year UG	Building technology 1: library skills	Finding material Reading lists Short loan collections
1st Year UG	Design & Communication 1: 20th century house project	Key skills Use of reference material, catalogues, databases Retrieving and evaluating information
2nd Year UG	Design & Communication 2: library skills	Refresher course Local information : PADDI
3rd Year UG	Professional skills 3	Trade & technical information Office management
1st Year PG	The dissertation: literature search techniques	Search methods Databases, Internet Printed sources, archives Citations, copyright

The course highlighted in this paper is the final library exercise for first year students which is completely integrated into a project to research a seminal building in the history of architecture and make a model of it. Students see retrieving information as an essential part of producing a very practical end product. They work in small groups and are assigned particular buildings to research such as the Farnsworth House, the Schroder House, Villa Savoie and others. At the end of the first week each group has to give a verbal presentation and submit a short report " giving extensive information about the assigned villa, its architect, its context and the spatial and compositional features of the project."[4] For the end of week 2 they are asked to make a 1:50 card model of their assigned building with rough production drawings. Then finally at the end of week 3 each student presents a set of drawings at 1:50 scale including two floor plans, an elevation and an axonometric. One of the stated aims of the project, along with visual appreciation of good architecture and presenting critically another architect's work, is developing library and information skills.

The Architecture Librarian gives two seminars with practical demonstrations and ample opportunity to ask questions. As well as finding out biographical details and historical information, students have to locate illustrations, plans and elevations. In the first talk students are taught how to approach their topic and how to check the library catalogue for relevant textbooks on their architect, building and historical period. They are introduced to key reference books such as specialised encyclopaedias and biographical dictionaries as well as to useful sources such as the slide collection. The emphasis in the second talk is on architectural databases such as APId and Avery, and on the Internet stressing the importance of gateways such as the RIBA's Ribanet Links and Library Links and ADAM amongst others. As well as learning about the most useful retrieval tools available to them, students are taught how to evaluate references and how to compare sources qualitatively. After the talks students spend a supervised afternoon in the library with staff on hand to help and advise. Key texts such as Dunster's *Key buildings of the twentieth century*[5] are available on short loan for the duration of the project but there is plenty of scope for students to put their new found skills into practice and unearth additional material.

By the end of the project students are familiar with the library and the various collections of particular interest to architects. They know how to use the catalogue, which databases to use and how to construct simple searches. They even learn that the Internet is not the be all and end all but searched intelligently can offer up untold gold. Not least students and library staff interact in a positive and mutually beneficial way and the basis is laid for the development of skills that will be useful to students throughout their course and beyond. These skills are honed throughout the rest of the user education programme, which is carefully structured to build on the first year courses and culminates in a detailed series of lectures tied in to the dissertation that all students must write in the first postgraduate year of the architecture course.

The first year library exercise focuses on internationally famous buildings but during their course students are also asked to look closely at their local environment. Library and School of Architecture staff some years ago identified a problem in locating local information. Students could track down references without number on, for example, Foster's Hongkong and Shanghai Bank but when it came to finding out something about the bank on the street corner of their home town they could retrieve nothing. There was a paucity of material to start with and the problem was compounded by the fact that such material as there was did not feature hugely in existing national and international databases. Something needed to be done and it made sense to tackle co-operatively what was obviously going to be a large project.

The story of PADDI (Planning and Architecture Design Database Ireland) is really a talk in itself and has been told elsewhere (Latimer[6]) but I felt I could not pass up the opportunity of advertising it here in Boston, a city with such strong Irish connections. In the early 1990s the two main architecture and planning libraries in Ireland, those at Queen's University Belfast and at University College Dublin, joined forces to establish a database of references to material on all aspects of architecture and planning in Ireland north and south. The first phase of the project (which at that point went under the acronym IDEAL – Irish Database of Environmental and Architectural Literature) involved pooling resources and exchanging data, standardising entries and subject headings and agreeing a practical division of labour. The end result was two stand-alone databases that proved highly popular with staff and students at the parent institutions.

In 1999 we took the decision to widen access to the database by establishing it on the World Wide Web. Thanks to funding from the Research Support for Libraries Programme (RSLP) we were able to appoint staff and obtain equipment to turn proposal into practice. By this stage we had had to abandon the name IDEAL because Academic Press had launched their International Digital Electronic Access Library which had the same acronym. We had learnt our lesson, however, and our new name PADDI is now trademarked despite some initial opposition from the Professional Association of Divers International.

PADDI (http://www.paddi.net) provides searchers with references to books, parts of books, journal articles, theses and semi-published literature on Irish architecture. Students learn early on in their course that references to local architecture are limited on the international databases and also that much useful information is just too early in date to be included in them. PADDI is the obvious source for local information and has the added advantage of pointing our own students to material that is readily available to them. It has already proved invaluable as a first stop for students working on the many projects that involve either inserting a new building into an existing and often sensitive local area or simply require students to research a local architect, building, town or village. It is also a two way process because students often turn up relatively obscure but useful references that can then be added to the database.

Queries from students used to take up large amounts of staff time and involved a lot of repetitive one-to-one training. Since the user education programme as a structured course has become embedded in the curriculum at Queen's, the library staff (and it is hoped the academic staff and students) have seen a number of improvements. Most obvious of these is that students have become much more self-sufficient during their course and enter the workplace with the necessary skills to research new projects and seek out relevant, high quality information when they need it as part of the design process. On a practical level as the number of students increases and the number of library staff either remains the same or even decreases, the advantage of having independent students who know their way around the library and the information tools available to them is self evident.

Integration of library courses within the academic course as a whole can only be achieved through a high degree of co-operation between lecturers and library staff. This has all sorts of added benefits from a management point of view in addition to the effective deployment of library staff mentioned above. The library staff has a high profile within the School and the Architecture Librarian attends staff meetings and has input where appropriate to course planning and content. This is particularly useful in ensuring that information skills are developed throughout the whole degree course and that library sessions are inserted into the curriculum at stages where they have the most impact.

Another benefit relates to the allocation of library budgets. As we all know, there is never enough money and it is much easier for librarians to allocate budgets fairly and effectively if they have a clear picture of the sort information students will be looking for. This is particularly important in the field of architecture since the basis of architectural education is studio project work and there are very few set texts. Having copies of the reading lists for lecture courses is not enough to ensure adequate provision of material. Working along with the teaching staff helps to alert library staff to the gaps in the collections and to where there is a need for additional copies. Funds can therefore be more effectively targeted. In the case of the PADDI project discussed above, a gap of a different kind was identified. Library and academic staff realised that the teaching programmes were being hampered by the lack of a good finding tool for local information and so a whole new service came into existence.

There is nothing radically new in implementing library instruction courses in Schools of Architecture. We have all been doing this in some shape or form for years. What is becoming increasingly obvious, however, is that if such instruction is to be truly effective as part of the whole education process for architects, it must be integrated into courses at the planning stage and fully implemented into design projects not simply treated as an add-on. Students will only take information skills seriously and use them throughout their careers if they see them as really relevant to working practice. The benefits are considerable. Students acquire a key skill that will stand them in good stead whichever direction their careers take; academic staff gain from teaching students who can pick up on references discussed at the drawing board (or computer terminal) and independently research them further; library staff get to know exactly what is being taught and can provide support when and where it is really needed.

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World Bank virtual tools and learning program on archives and records management in development

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Abstract:

As part of its commitment to transparency and to making development knowledge available, The World Bank is opening its own, unique archives to public access for items that are 20 years old or more, pending Board approval. The entire Archives contains over 135,000 cubic feet of development information related to World Bank Group member countries dating from 1946 to the present. As archives of a development institution, the World Bank has put in place a Learning Program to promote good governmental archival practices. These practices are essential in fighting poverty and corruption, and building transparent public administration practices.

Founded in 1944, the World Bank Group is the world's largest source of development assistance. The Bank, which provides loans to its client countries, brings a mix of finance and ideas to improve living standards and eliminate the worst forms of poverty. As part of its commitment to transparency and to making development knowledge available, the World Bank is about to open its own archives to public access for items that are 20 years old or more, pending Board approval.

The half century old World Bank Archives is a rich source of information on more than one hundred economies (both developed and developing) since 1947--the year the Bank made its first loan. The Archives holds 135,000 cubic feet of original source material dealing with development issues--from general country files to lending project files, from economic reports and sector studies to non-textual records such as photographs and films related to development projects, and oral history interviews. The Archives also represents the Bank's corporate memory. It explains what it has done and why. It documents the Bank's successes and its failures and its complex relationships with clients and partners.

The Bank first established a separate Records Center (which became the Archives) for older documents and records in 1969—after operating 23 years. The Archives maintains two repositories, one at headquarters in Washington D.C., and another in western Pennsylvania, a five hour drive from headquarters. The headquarters' repository—where most of the Archives' 25 staff are located--hosts the reading room. This repository has space for about 11,000 cubic feet of material. The repository in Pennsylvania is much larger, underground, and is in leased space in a former limestone mine (alkali-buffered walls!). Currently, the leased space of 45,000 square feet holds over 120,000 cubic feet of records. The Bank has five full-time staff employed at the "mine", and an overnight courier service can ship up to 42 cubic feet of records daily in either direction. Generally, Bank staff find that documents requested by 2 p.m. are available at headquarters the next morning.

The Archives went on-line in 1998, and built the Archives website in 1999.
Designed by Clive D. Smith, the World Bank Group Archivist, and produced by MadWolf Technologies, the Archives site contains a catalog of the holdings of the World Bank Archives in variable levels of detail, and enables the user to search for material relating to topics of interest. Comprehensive search tips, and information about how to use the Bank's archival resources are provided. The need for an on-line catalog was highlighted by the Archives Advisory Board, first funded by the Andrew W. Mellon Foundation, in its first meeting in early 1998 in view of the possible opening to wide public access that was first discussed at that time. The nature of our institution, which operates in more than 100 countries--and consequently of the archival collections--makes it imperative that we provide solid preliminary information on our holdings to a wide range of remote users who are unable to come to our headquarters to access the Archives.

The catalog provides descriptions of records at several levels: organizational unit, record series, file, item (or file volume), and report (or document). Included in the catalog, but searched separately, are summaries of oral history interviews. The catalog is populated with metadata drawn from our main internal database that was created for management of current records and archives. Consequently, the descriptions, originally composed for the use of the professional records and archives staff only, are uneven in quality, and may be obscure to researchers. Work is ongoing to enhance the descriptions and make them more meaningful for public use, but we decided to make them available now with the view that *some* information is better than *none.* We are also working to make the catalog search options more user-friendly, and are adding a browse function. We hope that future enhancements will include links to the catalog from other related Bank databases on the internet (such as the database of Bank development projects, World Development Sources), and links from the catalog to the full text of documents and publications where these are available online. We would also like to include a means of requesting copies of documents or more information at the click of a button. We welcome any feedback! The on-line catalog is at: http://archives.worldbank.org .

To raise awareness, for advocacy, and to improve communication, the Archives Learning Program is offered on the same website as the on-line catalog. This activity is consistent with efforts sustained by the Archives for the past three years between the institution and its client countries. When the users get to the website homepage, they are immediately given a snapshot on the full range of products the Archives offers in addition to the catalog: from exhibits to a oral history program, from details on the Learning Program to proposed future initiatives such as the Archives of Development. Since the website was launched, the monthly visits have grown from the initial 3,000 (registered in April 2000) to the current average of 7,500 (registered from October 2000 on).

The Learning Program is a side-activity to the opening of the Bank's Archives and is targeted to managers of development projects in the Bank and in the countries. The message conveyed by the Learning Program is that good governmental archival practices are essential in fighting poverty, corruption and building democratic public administration practices. The Program's objective is to advocate the inclusion of archives and records management components in civil service reform, decentralization, legal/judicial reform, tax policy and administration, public expenditure analysis and management, and anticorruption and governance projects—all thematic areas identified by the Bank Poverty Reduction Network (PREM) in their sector strategy in operations. Accordingly, the Learning Program offers a range of learning opportunities on the impact of current records and historical archives on economic and social development. We also offer checklists to evaluate records management capacity at the country and agency level.

On June 6, 2000, the first multi-site video-conference workshop for Africa on archives and records management, poverty reduction, and corruption control took place as part of the Learning Program. The workshop inaugurated the Global Distance Learning Network classrooms in Ghana, Tanzania, and Uganda. It provided a forum for high-level civil service officials, World Bank task managers, senior managers, anti-corruption specialists, and the International Records Management Trust, to share their views and exchange experiences on archives and records management as key tools in development strategies. The Bank is currently implementing the recommendations made by the workshop participants to further develop the Learning Program. Proceedings of the workshop are available in our website (Learning Program, What's New page) at http://archives.worldbank.org . The Archives--in partnership with the Poverty Reduction Network--has just presented a proposal for a five-year follow-up program to the Grant Facility of the Bank ("Evidence based governance in the electronic age").

The Learning Program, under World Bank coordination, is a joint collaboration between the World Bank, the International Council on Archives (ICA) in Paris, the International Records Management Trust (IRMT) in London, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) in Rome, and the Fundación Histórica Tavera in Madrid. The official approval of the partnership by the World Bank Managing Director in February this year has given the program high level institutional endorsement. The Learning Program is available at: http://archives.worldbank.org .

Right now, researchers may conduct a preliminary search in the on-line catalog, contact the World Bank Archives, and come to Washington to work on Archives material in the Reading Room. They will receive assistance locating further information from the team there. However, more detailed finding aids are needed in the catalog before researchers can know exactly what is contained in the Archives by using the on-line catalog. Until that happens, researchers will be assisted by the archivist in finding out what material is available. We are also considering the possibility of digitizing on demand and providing online access. We are now collaborating with students from local universities. They will work in the Archives this summer and fall. They will each complete a paper on contents of the Archives in the sector they select. This paper will be placed on the web site as a guide for other researchers.

The access to data from the past contained in the Archives has emerged as a principal need from sector specialists in academia. Special emphasis will be placed on holdings which contain data sets. The old data sets can now be looked at from a different perspective. Special notes indicating data contained in the Archive will be placed in the finding aids.

Once the finding aids have been enhanced, a faculty team would manage approaches to having students develop research projects for credit. The projects results would be more predictable thanks to the finding tools. In addition to the student-researchers idea, George Washington University Global Management and Research School of Business and Public Management has expressed interest in putting together a consortium of local universities to do research in the Archives. The consortium would be one way to access the Archives for these institutions, but it would not be restrictive. It is also hoped that funds can be identified to provide some subsidies for interns and graduate students in the future to do substantive research in the Archives, in collaboration with World Bank specialists.

In conclusion, we invite you to visit our web site, http://archives.worldbank.org, and to contact Elisa Liberatori Prati, eliberatoriprati@worldbank.org . We enthusiastically look forward to having researchers and students come to the Archives in Washington D.C., to pursue research and study on a short or long term basis. This vast resource of the history of development is unique in the world. We are interested in collaborating with universities and research institutes in publishing research from the Archives, and welcome your ideas.

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Strategies for Managing Digital Records and Documents in the Public Sector in Sub Saharan Africa

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Abstract:

Government is the largest collector and disseminator of records and documents in Sub Saharan Africa (SSA). Traditionally, the bulk of the information has been paper-based. The advent of information technology brought about digital formats. Plans for ensuring the survival of digital information are inadequate. In fact, instances have been reported whereby vital digital information has been lost as result of obsolete technologies. Strategies for managing digital documents over time in order to ensure that they are retrievable and usable must be developed. Skills development and collaboration with countries that have made advances in digital preservation will also be decisive.

Background

Government is the largest producer of records and documents.[1] In fact, information is government's most critical resource. Government needs information to manage national resources, execute national functions, measure performance and deliver services.[2] Most of the information produced by government is also central and fundamental to the rights of every citizen, and to the process of democratic governance irrespective of its format. Thus, it is incumbent upon government to preserve its information and provide broad public access to it.[3]

Access to government documents is key to government accountability to its citizenry. Citizens can seek redress for acts of omission or commission by a government and its officials if they have access to information. Access to information is denied if desirable existing information is not available, for whatever reason. However, information technology (IT) might become one of the causes of inaccessibility of government information in Sub Saharan Africa (SSA). Whilst IT can enhance access to data, information and knowledge, on the other hand, it can easily make electronic information inaccessible over time if not appropriately managed. In order to strike a balance between the varying effects of IT, SSA should devise strategies that will harness IT potentials as well as ensure that the information and knowledge created using the tools does not disappear.

The use of IT is very crucial in a world that is characterised in terms like, "global village", "global information society", "knowledge age", and "information age".[4] In recognition of the fact that IT is one of the major drivers of modern societies, governments in SSA have formulated and implemented policies on the acquisition of IT.[5] Furthermore, every economic structural adjustment programme initiated by the World Bank included a considerable component of IT transfer and upgrading.[6]

Technological transfer and change have brought about "the additional challenge of digital preservation."[7] However, governments in SSA have not formulated strategies to deal with the challenge. Additionally, preserving and promoting access to digital information resources is not adequately addressed due to lack of training and research into procedures and standards on digital preservation.

Thus, under the present circumstances, continued access to government records and documents in digital form in SSA cannot be guaranteed within acceptable limits. It seems that continued access to and the survival of digital information in SSA will largely depend on formulating strategies for managing it.

Management of information in Sub Saharan Africa

Traditionally, the bulk of the information created by government was paper-based. New information and communication technologies (ICTs) have ushered in the production and use of digital documents. The major driving force behind the technological changes has been the computer. Computers are considered as the major solution to the inadequate government information systems in Africa.[8]

In order to address the situation, the African Information Society was launched in 1996 with a vision to build information systems to (i) enhance policy formulation, (ii) improve the quality of life of every African, (iii) increase access to information and (iv) connect Africa to the global information society.[9] Efforts to build the African Information Society have revolved around capacity building in the following areas, (i) acquisition of information and communication technologies; (ii) capturing and disseminating information timely; (iii) software development and building local content and connectivity.[10]

Very little attention, if any, is being given to preserving the integrity and usability of the information that is being generated as a result of utilising ICTs. Although capacity building in ITCs is good in itself, it tends to be a futile exercise when issues pertaining to preserving the resultant digital information are not adequately addressed. It is quite true that capacity building and global connectivity will determine how Africa is going to benefit from opportunities provided by information revolution.[11] However, policy makers and stakeholders should give preservation of digital data the same emphasis they are giving to the need to utilise ITCs.

Moreover, most ITCs projects initiated in SSA heavily rely on expatriate expertise for their management and implementation.[12] Typically, the projects take a couple of years to implement. The emphasis tends to be on the short-term processing benefits and capabilities provided by IT at the expense of managing the information being created and stored. However, when expatriates withdraw the local people come face to face with issues of managing and sustaining the computer-based projects. The management issues include ensuring the survival of the digital information and continued access to it by present and future users. These are challenges that few, if any, SAA governments appear to be ready for.

There are at least three major issues associated with managing digital documents that need to be addressed to ensure that digital information does not disappear.[13] Firstly, the media is unstable as compared with "traditional" information carriers such as paper or film. Secondly, access to digital information is dependent on machines and software. If the appropriate technology is not available, humankind cannot read or use digital information. Rapid technological changes in the digital information industry and market inevitably lead to media obsolescence. Thirdly, electronic data deteriorate over time, especially, when it is not compliant with generic document standards such as XML and SGML.[14] Thus, data emulation and migration are necessary to maintain the integrity of the data. Consequently, the need to guarantee "technological access" to information is one of the major challenges posed by digital formats ushered in by the Information Age, particularly, in SSA.

Challenges posed by digital technology to the management of recorded information have led to the commissioning of a number of digital preservation projects by governments and organisations in the developed world.[15] Furthermore, international organisations such as the United Nations (UN) have commissioned studies to investigate the management of electronic information.[16] However, such projects are conspicuous by their absence in SSA. In a study carried out in Ghana, Uganda and Zimbabwe it was discovered that the countries do not have the capacity to manage electronic records.[17] Mrs. Ndiyoi Mutiti, Director of the National Archives of Zambia, also came to the same conclusion in her study of the technological infrastructure and needs carried out in Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.[18]

In addition, some instances have been reported whereby vital digital information has been lost into obsolete hardware and software.[19] For instance, in Zimbabwe the Salary Service Bureau, a government department that is responsible for processing civil servants' salaries and pensions, lost all the information created and stored on computer tapes between 1980 and 1994.[20] The problem only surfaced when a newly introduced computer-based information system could not read most of the older computer tapes. Similar cases are likely to be experienced in many countries in SSA as they further embrace IT because they do not have adequate programmes for the preservation of electronic information.[21] In fact, electronic records are being created in many public institutions in SSA, and some are being mismanaged and lost. Hence, availability and accessibility to electronic information should become the major issues in the use of IT in public administration in SSA.[22]

Challenges to the preservation of digital information in Sub Saharan Africa

The transfer of technology requires the establishment of training to develop the necessary skills for its management.[23] Policy and decision-makers from Africa also identified "finding sufficient human resources to design, install, maintain and use" ITCs as one of the threats and challenges to Africa's integration into the global information society.[24] Indeed, training in the management of ICTs in SSA has been very sparse. Lack of trained staff is likely to have a negative impact on the management and preservation of electronic records in SSA. The situation is compounded by the fact that no meaningful research is being undertaken into digital preservation. In the absence of archiving standards for electronic documents and with elusive technical solutions to how best electronic information can be preserved, the continued existence of and access to government information in SSA is extremely endangered.[25]

Policy makers seem to be unaware of the implications of digital technology to long- term access to information. If at all they are aware, they seem to be giving inadequate attention to the issue. Perhaps, what is needed to draw their attention is something as scary as the Year 2000 (Y2K) problem.[26] For example, the Y2K problem prompted the World Bank to monitor all loans and credits to ensure that the programs were Y2K compliant. On the other hand, its Information for Development Program (infoDev) was also offering grants to governments for planning and implementing national strategies linked to Y2K.[27]

National coordinating committees, which ensured compliance with Y2K standards, were the mainstays of SSA governments' involvement in solving the problem. Perhaps, we need the same strategy to deal with the preservation of electronic records in general, and in SSA in particular. In fact, it seems the threat of the disappearance of government digital information into obsolete technology and the fragile media is more substantial than the Y2K problem.

Way forward

The long-term strategy for preserving information in digital form encompasses the protection of the digital information for as long as that information has value to government and society. In that light, SSA countries should take advantage of the growing trend towards international co-operation in technological research and development and forge strategic alliances with countries and organisations that have made advances in digital preservation. Additionally, information professionals should play a visible role in helping their national governments to formulate policies that provide for procedures for the creation, use, disposition and preservation of electronic records. Equally, the creation of specialised training institutes as well as re-engineering national educational plans to include IT management skills should also be high on the agenda of information professionals in SSA.

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For national memory and for democratic accountability: In an on-line age, are these conflicting tensions still manageable within the construct of "official information"?

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Abstract:

Introduction

"A vanishing record" suggests a paradox. The digital paradigm expands access - a gain to democracy - but may not preserve evidence for future generations – a loss for history. The paradox is that digital publication allows an explosion of content and a gap into which has vanished much of the record of national identity.

The Nation State

Theories of the state show that the autonomous nation with wide coercive powers reached its peak in the twentieth century. The nineteenth century saw earlier loose confederations adopt, with the impetus of new technologies, more structured forms. The twenty-first Century begins with "globalisation" driven also by new technologies - a world where governments no longer exercise direct sovereignty over either their defences or their economies[1]. New Zealand, a nation of 3.8 million and 2,000 km distant from its nearest neighbour, reflects these trends. Regional affiliations are increasingly valued in a nation of inveterate travellers, with a third living in one city and the rest spread out over a land mass the size of Japan. New Zealanders' lives are now more affected by decisions in the US Stock Market or in Australian politics than they are by their national government. That government has, moreover, embraced "roll back the state" precepts in the ideological belief that wide state powers are inherently both inefficient and ineffective.

To understand what the nation state of the mid-twentieth century was like, (personal memory aside) the evidence is largely in the publications of the period, conveying to future readers the facts and a sense of the general dynamic of their time. Libraries, which ensure that publications are kept over time, help people understand their national identity from such resources.

The nation state itself published for many reasons. For a democracy, informed debate depended on access to reports and to parliamentary proceedings. For an autocracy, the threat of informed debate had to be pre-empted by dissemination of "the party line". In both cases the state's official publications bore its stamp of either impartiality or of doctrinal orthodoxy. They survive in research libraries to tell us about the identity of the nation state whose authority they sought to represent.

Official Information

In a democracy, what distinguishes "official information"? The concepts of "official statistics" in New Zealand can apply: verifiable data analysed with impartiality; made available through deliberate price subsidies; and copyright clearance where wide dissemination is desirable for a public policy purpose[2]. It requires a capability to manage data as a public good. Narrow interpretations of efficiency diminish this capability, leading to shorter print runs, higher prices (i.e. less subsidy), and dissemination with a shorter timeframe in mind. In a digital world, with a diminished role for the nation state, the need for official information to feed democratic debate is accepted. There does not remain an acceptance of the need for permanence, as the state has less need of long-lasting records to assert its all-pervading authority. This risks future access to the national memory.

E-Government

The potential of the web has led to formal strategies of "E-Government", e.g. the British goal to "lead the UK in its drive to be the best place in the world for e-commerce"[3]. A 2001 survey by Accenture placed Singapore in the top "innovative leaders" group, with the UK in the second tier, of "visionary followers"[4]. Much official publishing in the UK has fragmented: Corporate Document Services (CDS) is a company designated as "the official publishers of the UK Government's Department of Social Security", while the privatized former HMSO trades knowledge economy products with a "click-use-pay inforoute"[5]. The US Bureau of Census was an early user of the web as a primary (rather than secondary) mode of publication, where data can be published quickly and continuously updated. Web delivery shifts production costs from the publisher to the consumer; while hyperlinks allow rich referencing.

Two risks in these benefits from on-line publication are:

1. the risk of the "digital divide". This may be more rhetoric than reality; predictably, those using printed official publications (analysts and libraries) are least likely to be on the "wrong" side of the digital divide.
2. the risk of confusing the original record and subsequent revisions; analysis may be difficult in the absence of stated "publication dates".

This second risk points to the paradox: the immediacy and hyper-linking of on-line publishing outweighs the longer-term benefits of having definitive records in permanent formats for consultation decades later. One intrinsic benefit of print, offsetting long lead times and high costs, is its near indestructibility. "Knowledge in the mind of a man dies with him; facts in manuscript form are evanescent, as a manuscript is easily lost or burnt. Put in print and indexed, knowledge is practically imperishable"[6].

CASE STUDY – THE 'NEW ZEALAND FIRST' PARTY MANIFESTO, 1996

Democracy is the electorate holding rulers to account. One of its basic checks and balances is the use of evidence to challenge the assertions of rulers. A recent New Zealand case epitomises a longer-term risk of digital publishing. The 1996 General Election was for the first time held under the "Mixed Member Proportional" (MMP) system to overcome the previous marginalisation of minority parties. A minority party, "New Zealand First" (NZF), won enough seats to hold the balance of power in the single-chamber Parliament. For six weeks government was in paralysis while NZF negotiated its partnership, resulting eventually in a coalition which governed with declining public satisfaction until voted out in 1999.

The point of this case study is that NZF publicized its 1996 manifesto on its website. Immediately the election result was declared and that website simply disappeared. There is no archive copy. While the coalition negotiations were going on, there was no real record of what NZF was committed to. This experience could now extend to agencies of governments. E-Government may offer fast access to complex knowledge, but equally can permit instant disappearance of knowledge. Website archiving is primitive and libraries still explore "prototypes" while the potential and actual gaps of recorded memory grow.

CASE STUDY : "THE NEW ZEALAND OFFICIAL YEARBOOK"

New Zealand is a relatively remote society where the market for print publishing is small and IT has been enthusiastically adopted. SNZ is one its largest publishers and its dataset INFOS was one of New Zealand's first on-line resources. The "flagship" publication is *The New Zealand Official Yearbook*, first published in 1897, which has long used innovative ways of presenting official statistics. It is an icon, best expressed by Oliver Duff in 1940: "The *Official Yearbook* is easily the best all-purpose volume about New Zealand for those who can thrive on iron rations. The Bible is still the best explanation of the New Zealand way of thinking. The student who can turn to the two books with an open mind will find facts in one and the colour and cast of minds in the other"[7].

In 1999 SNZ decided, after some consultation, not to publish a printed *Yearbook*, but to issue it only on the web. (Interestingly, the "success" of this move shows in the decision to publish the 2000 *Yearbook* in both print and web formats.) In 20 years time, the researcher will be able to consult the *Yearbook* from 1897 for particular years or comparatively across years. This will not be so for 1999, when future generations were not seen as part of the market for fast access. 1999 may well be "a vanishing record", because of that digital publishing decision.

These developments are matched at other agencies. Parliament itself is replacing printed statutes with on-line versions as the definitive record. The official vision describes "e-Government" as "a way for government to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of these services, and to provide greater opportunities to participate in our democratic institutions and processes".[8] But how well will they empower users 20 years hence compared to the ways in which the published hard-copy output of New Zealand official agencies of 20 years ago can enable today's researchers to comprehend the recent past of current issues?

OFFICIAL PUBLICATIONS AS THE "IRON RATIONS" OF NATIONAL IDENTITY

This outcome from digitization is not confined to New Zealand; tension between immediate and longer-term effects will apply internationally. Duff's metaphor of "iron rations" is central to this argument - official publications are not the sole embodiment of national identity. They are an embodiment of the nation state, once a powerful influence on national identity and now less so. They are enduring reminders of the nation state's view of itself.

Libraries must serve both markets – present and long term. An "information age" irony is that libraries are among the few agencies equipped to serve both markets, through their commitment to preserving knowledge irrespective of the transitory swirls of fashion.

CASE STUDY : HISTORICAL OFFICIAL PUBLICATIONS FOR MODERN ACCOUNTABILITY

Contemporary democratic accountability and historical national identity are two quite different outcomes of digital publishing. The two do intersect, as a strategic policy issue for New Zealand shows - the late shows -- late twentieth century use of the published records of nineteenth century colonial governments In 1840 the British Crown signed the Treaty of Waitangi with New Zealand Maori to, in effect, guarantee stability against foreign powers while preserving the rights of tribal chiefs. Before long the influx of colonists marginalized the intent of the Treaty and by 1900 the settler government had authorized widespread confiscation of Maori lands. The details may be found in *The Appendices to the Journals of the House of Representatives* - published as public record. This evidence, along with archival material, has been used since the establishment of the Waitangi Tribunal in the 1980's to address claims for compensation.

CONCLUSION

Many academic libraries have large "Official Publications" collections built through exchanges, which are now less stable as more content is digitized and/or privatized. The output of international bodies important to New Zealand is increasingly less tangible e.g. European Union (EU) publishing is difficult to navigate. Yet the EU's websites contain a wealth of policy developments which reflect modern Europe just as the volumes of British, German and Polish official publications of earlier years did for their time. We can still look at the UK volumes of the late nineteenth century and understand from them what the British Empire was about. We can still sense from the German volumes of the 1930s the menacing fascism which had such destructive consequences worldwide. Today we can sense from the Polish volumes of the 1970's the depressing sterility of the now almost forgotten "Peoples' Republics".

The risk is that, twenty years hence, our successors will not be able to develop that sense of what early twenty-first century nations were like. The distinctive identity may show through in websites – if any survive with 2001 content. More likely, our successors will be presented with very transitory evidence – the predictable corollary of "the knowledge society" being a vanishing record which will result from too extreme a shift to digital publication of the official records of Government.

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The Institute of Public Administration's Document Center: From Paper to Electronic Records - A Full Image Government Documents Database

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Abstract:

Since its establishment in 1960, the Institute of Public Administration (IPA) in Riyadh, Saudi Arabia has had responsibility for documenting Saudi administrative literature, the official publications of Saudi Arabia, and regional and international organizations, through establishment of the Document Center in 1961.

This paper will present the experience of the Institute of Public Administration Document Center in the documentation of administrative information and the stages of information technology developments in managing the collections of the Center.

I. The Document Center:

In order to achieve its goals of documenting administrative information, the IPA established the Document Center with the mission to acquire and organize the administrative documents of the Kingdom of Saudi Arabia and making them available to its users.

(A.) Objectives[1] of the Document Center :

1. Acquiring and collecting of government documents and official publications of regional and international organizations and agencies.

2. Setting the working policy and procedures for acquisition, organization, and services.
3. Collecting official newspapers of the Arab countries.
4. Organizing of the collection according to the cataloging and classification rules.
5. Providing document services.

(B.) Users[2] of the Document Center :

1. Government agencies.
2. Staff and students at the IPA.
3. Researchers and graduate students from outside the IPA.

(C.) Administrative Sections:

1. The department of government documents and official publications: it is responsible for acquiring, organizing, and information disseminating.
2. The department of archiving: Its responsibility is to take care of electronic document scanning and micro-copying for documents and national newspaper.

(D.) The collection:

The collection of the center is divided into two main groups: Saudi administrative literature and the official publications of Saudi Arabia and the regional and international organizations. The IPA/DOC center succeeded in acquiring its collection through cooperation with other Saudi government agencies.

Table 1: Document Number by type up to the end of April, 2001

Type	Quantity
Royal Decrees	2093
Royal Orders	2127
Directive Orders	2333
Council of Ministers Decrees	23104
Ministerial Decisions	16011
Circulars	6535
Letters	3760
Agreements	150
Others	134
Total	56247

The IPA/DOC center was able to build its collection of all types of Saudi administrative documents to more than 56380 documents (see table 1). Also the collection of official publications of Saudi Arabia and international organizations includes publications issued by government organizations and private enterprises in both the Kingdom and other countries that have diplomatic relations with Saudi Arabia has grown to more than 5296 volumes. (See table 2)

Table 2· The collection of Official Publications

Type	Collection		Total
	Arabic	Others	
Saudi Government Publications	1970	250	2220
International organizations	1763	1313	3076
Total	3733	1563	5296

The card catalogue was used to organize the collection. Each bibliographic record contains the following fields:

- The document title, number and date of issue.
- Type of document.
- Issuing body.
- Subject headings.

The original copies of the documents were kept in boxes and classified according to its original source and chronological order.

(E.) Stages of information technologies developments:

The document center has experienced several stages of technological developments.

1. **The first stage** started in the beginning of 1981. The IPA/DOC Center and the computer department at the IPA designed and built the first in-house software package at the IPA, called Nomo. The card catalogue was converted to the electronic format of Nomo. This development helped the user access the collection easier and faster by means of the following access points:

- Accession Number
- Number and date of issue
- Issuing body
- Related document number
- Subjects
- Abstract
- Microfiche reference

The original copies of the documents were photocopied on microfiche. All information about the slide number, the shot number, and the number of pages was included with the document bibliographic record.

2. **The second stage** began in 1993 when the officials at the IPA/Doc center decided to build another system in order to keep up with advancement in information storage and retrieval technology. The new software was tested and ready for operation by the end of 1994. It was called Nomo (II). Consequently, all bibliographic records were transferred from Nomo to the Nomo (II) system.

As a result of this stage, the user of Nomo II had instant access to the original copy of the document by displaying it on the computer monitor. This feature was done by using the technology of document scanning and optical storage. The IPA/Doc center was able to expand its use of technology, so they acquired the appropriate hardware and software to connect Nomo (II) databases with images of the original documents stored on two optical disks.

Functions of Nomo (II):

The new version of Nomo (II) consists of the following functions:

- Recording, Cataloging, Retrieving
- Production of statistics and reports
- System administration and maintenance

Features of Nomo (II):

Nomo (II) has the following features:

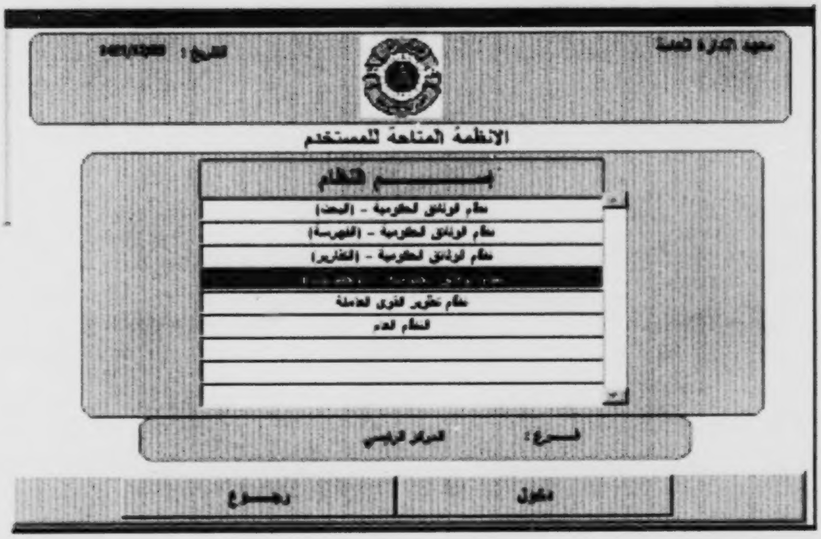
- Dial-up connection
- Keyword searching of the abstract
- Several access points:
  - Document number
  - Document original source
  - Document type
  - Title

Nomo (II) Main Screen:

All information stored in the system can be navigated through the main screen (See Figure 1). Users can access the system by selecting one of the following access points:

1. Searching module.
2. Cataloging module.
3. Reports module.
4. Statistics module.

Figure 1: Nomo (II) Main Screen


معهد الإدارة العامة
التاريخ :
الأنظمة المتاحة للمستخدم
اسم النظام
نظام الوثائق الحكومية - (البحث)
نظام الوثائق الحكومية - (الفهرسة)
نظام الوثائق الحكومية - (التقارير)
نظام تطوير القوى العاملة
النظام العام
الفرع : المركز الرئيسي
دخول
رجوع

The Searching Function:

Users can search for any document (see figure 2) by:

1. Subject headings.
2. Document title, type, date, number, and accession number.

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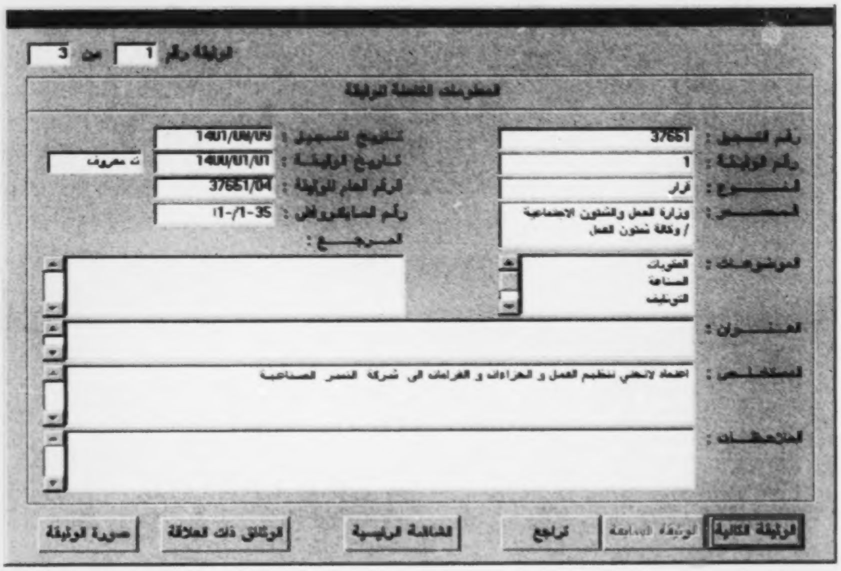
3. Source of the document.
4. Reference number of the document image stored on the optical disk.
5. Free text search in the abstract only.

Figure 2: Nomo (II) complete searching record



الوثيقة رقم 1 من 3

المعلومات الكاملة للوثيقة

رقم التسجيل : 37651

رقم الوثيقة : 1

النوع : قرار

المصدر : وزارة العمل والشئون الاجتماعية / وكالة شئون العمل

الموضوعات : العقوبات
الساعة
التوظيف

تاريخ التسجيل : 1401/00/09

تاريخ الوثيقة : 1400/01/01 ت معروف

الرقم العام للوثيقة : 37651/04

رقم الميكروفيلم : 11-/1-35

المرجع :

العنوان :

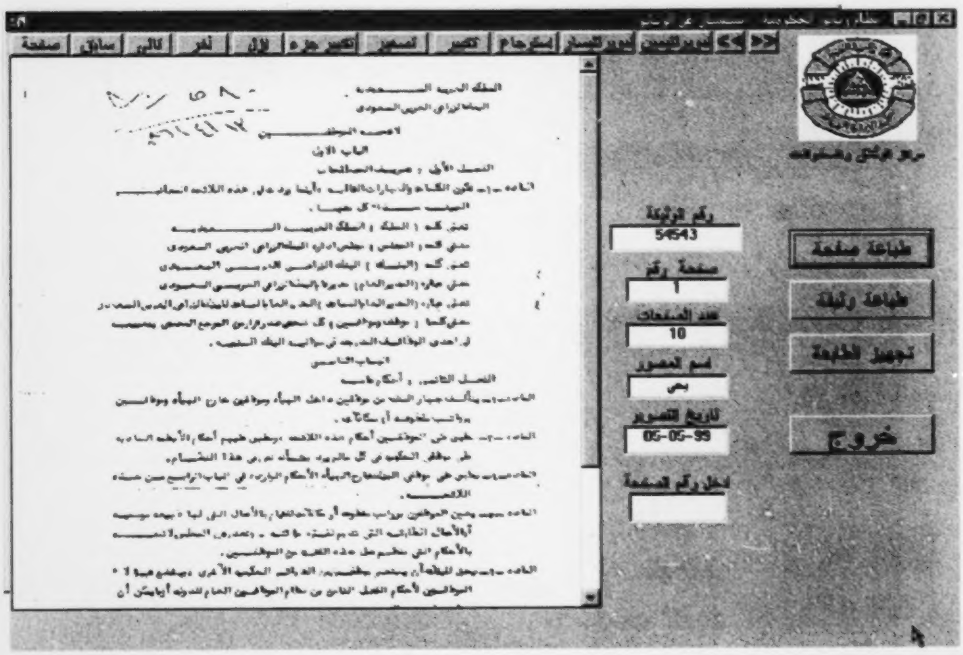
المستخلص : اعتماد لائحتي تنظيم العمل و الجزاءات و الغرامات الى شركة النسر الصناعية

الملاحظات :

الوثيقة التالية
الوثيقة السابقة
تراجع
القائمة الرئيسية
الوثائق ذات العلاقة
صورة الوثيقة

When a user searches for a document, he/she can see a copy of the original document displayed on the computer monitor (see figure 3). This will allow the user to decide if he/she needs it before printing.

Figure 3: Nomo (II) complete searching record



رقم الوثيقة 54543

صفحة رقم 1

عدد الصفحات 10

اسم المصور بحي

تاريخ التصوير 05-05-99

ادخل رقم الصفحة

صفحة
سابق
تالي
أخير
أول
تكبير جزء
تصغير
تكبير
استرجاع
تدوير اليسار
تدوير اليمين
مركز الوثائق والمحفوظات
طباعة صفحة
طباعة وثيقة
تجهيز الطابعة
خروج

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II. Conclusion

In conclusion, the IPA/DOC center has moved into first place among government information centers in collecting and managing administrative information, and in making it available to decision makers, researchers, and users.

Success in designing an electronic information system that can store a bibliographic record and display an image of the original document has helped the IPA/DOC center to compete with others in the digital age of information.

[1] Al-Askar, Fahd. (1993) "The Experience of the IPA Document Center." Paper presented to a symposium on the documentation of administrative information from May 27 to 28,1989. Riyadh: the Institute of Public Administration. (In Arabic)

[2] Al-Askar, Fahd. (1993) "Measuring the usage of administrative documents at the Institute of Public Administration." Paper presented to the IAIDPA meeting in July 23,1993. Toluca, Mexico.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	**113-173-S**
Division Number:	**VIII**
Professional Group:	Regional Activities: Latin America and the Caribbean
Joint Meeting with:	-
Meeting Number:	173
Simultaneous Interpretation:	**Yes**

Investigación en Ciencia de la Información: un desafio latinoamericano para construir la sociedad de la información

(Research in Information Science: a Latin American challenge to construct the information society)

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University of Brasilia, Brazil
samaral@unb.br)

Resumen:

Este estudio presenta un panorama del desenvolvimiento de la área de la Ciencia de la Información en Brasil y sugiere que sean estimuladas posibilidades de intercambios de experiencias entre los países de América Latina, en la tentativa de obtenerse la mejor inserción de esa área del conocimiento en el contexto de la sociedad de la información, aprovechándose el potencial positivo de los aspectos bien desenvolvidos en algunos países de esa región en el ámbito de la investigación en la Ciencia de la Información. La realidad brasileña es presentada con más detalles, en virtud de las facilidades encontradas para la colecta de los datos necesários para la presentación de este trabajo

INTRODUCIÓN

Los cambios de conceptos e ideas provocan la necesidad de una profunda transformación en nuestra vision de mundo, de modo a permitirnos acompañar y comprender los constantes cambios de la sociedad en que vivimos, permanentemente influenciada por todas las tendencias sócio-econômicas, políticas y culturales, que afectan de certa forma nuestra existência.

En la década de 90, el cambio de paradigmas en todas las áreas del conocimiento humano tuvo como consecuencia grandes transformaciones en la sociedad como un todo.

En la literatura, los términos "era de la información, sociedad póst-industrial, sociedad de la información, sociedad del conocimiento y sociedad inteligente son utilizados, indistintamente, designando esa nueva y emergente sociedad.

En cada país, la sociedad de la información está siendo construída en medio de diferentes condiciones y proyectos de desarrollo social, según las estratégias moldeadas de acuerdo con cada contexto. Las tecnologias envueltas vienen transformando las estructuras y las prácticas de producción, comércio y consumo, de cooperación y competición entre los agentes, modificando, por lo tanto, la própia cadena de geración de valor. Del mismo modo, regiones, segmentos sociales, sectores económicos, organizaciones e individuos son afectados diferentemente por el nuevo paradigma, en función de las condiciones de acceso a la información, de la base de conocimientos y, sobretodo, de la capacidad de aprender e inovar. Los países economicamente desarrollados, así como una buena parte de aquellos que están en vias de desarrollo, ya adoptan políticas e iniciativas dirigidas para la sociedad de información. (Sociedade, 2000, p.5)

Este es el gran desafio que se presenta, pues es en ese complejo y diversificado ambiente que la ciencia tiene que avanzar en la búsqueda de las soluciones para los problemas de la miséria, el hambre y la exclusión de la sociedad y de las oportunidades para una sobrevivencia digna.

En este escenário, la Ciencia de la Información surge en el horizonte de transformaciones de las sociedades contemporâneas, que pasaron a considerar el conocimiento, la comunicación, los sistemas de significado y los usos de la lengua como objetos de investigación científica y de dominios de la intervención tecnológica. Así, al mismo tiempo en que entraban en crisis algunos de los presupuestos epistemológicos que justificaban la imagen de la ciencia moderna, empezaba a formarse ese nuevo campo científico que asumiría una parte importante do meta-discurso occidental sobre las ciencias, discurso que sería construído a partir de resultados formalizados de la produción de conocimientos. La Ciencia de la Información constituyese así, al mismo tiempo, como una nueva demanda de cientificidad y como un síntoma de los cambios en curso que afectarían la producción y dirección del conocimiento. (Gonzalez de Goméz, 2000).

En esta perspectiva, en el ámbito de América Latina, es compleja la situación referente a la investigación en la Ciencia de la Información como un desafio en la construcción de la sociedad del conocimiento, pues los países latinoamericanos reflejan los más diferentes estadios de desarrollo de sus respectivas sociedades.

Este estudio presenta un panorama del desenvolvimiento de la área de la Ciencia de la Información en Brasil y sugiere que sean estimuladas posibilidades de intercambios de experiencias entre los países de América Latina, en la tentativa de obtenerse la mejor inserción de esa área del conocimiento en el contexto de la sociedad de la información, aprovechándose el potencial positivo de los aspectos bien desenvolvidos en algunos países de esa región en el ámbito de la investigación en la Ciencia de la Información. La realidad brasileña es presentada con más detalles, en virtud de las facilidades encontradas para la colecta de los datos necesários para la presentación de este trabajo.

De esta manera, se buscó, en el contexto de la área de investigación en la Ciencia de la Información, la definición de algunos aspectos que poderán ser explotados de forma de cooperación, en la búsqueda de una sociedad de información más justa, observándose los principios de preservación de la identidad cultural de cada país y respetándose las diferencias para así buscar una efectiva participación social de todos.

SOBRE LA CIENCIA DE LA INFORMACIÓN

La preocupación con la fundamentación filosófica y conceptual de la Ciencia de la Información es un tema abordado por estudiosos de renombre internacional como Shera, Mikailov, Saracevic y otros.

Con respecto a la Ciencia de la Información, Saracevic (1992) considera como su objeto de estudio el comportamiento, las propiedades y los efectos de la información en todas sus facetas, tanto cuanto a los vários procesos de la comunicación que afectan y son afectados por el hombre. Él afirma que la Ciencia de la Información és mas especulativa que práctica y entre ella y la tecnologia de la información hay una diferencia semejante a la que se verifica entre la investigación biomédica y la práctica da la Medicina.

Pinheiro (1999) tiene la opinión de que la Ciencia de la Información tiene su própio regulamento científico, como ciencia social y, és por lo tanto interdisciplinar por su naturaleza, presentando interfaces con la Bibliotecología, Ciencia de la Computación, Ciencia Cognitiva, Sociología de la Ciencia y Comunicación entre otras áreas. Sus raízes, en principio, vienen de la bifurcación de la Documentación / Bibliografia y de la Recuperación de la Información, considerándose que la própia información, por si misma, sea de categoria abstracta y de difícil aprehensión. Entretanto, se recuerda que la información, como produto del hombre, está inscrita en diferentes contextos, sea científico, tecnológico, educacional, político, artístico y cultural, aunque inicialmente mas asociada a la ciencia.

En articulo publicado en el Journal of the American Society for Information Science and Technology, volumen 52, número 1 de 2001, escrito por Donald T. Hawkins, editor jefe del Information Science Abstracts (ISA), es presentado una definición y el mapa de la Ciencia de la Información. El ISA es la publicación más antigua, como índice y resumen de la área de la Ciencia de la Información, representando un conceptuado papel como "gatekeeping" en la identificación de los cambios ocurridos por el análisis de la literatura inventariada. El artículo resume y revisa la história del ISA, publicación bajo la responsabilidad del American Documentation Institute, que cambió su nombre para American Society for Information Science and Technology en 1970. Un nuevo trabajo definiendo el término para el ISA es derivado tanto de los aspectos de la revisión histórica, como de los avances tecnológicos. La definición partió de un documento prévio básico sobre el dominio de la indústria de la Internet en los días de hoy. La Ciencia de la Información es una disciplina estructurada en importantes conceptos de un número de disciplinas proximamente relacionadas que se transformaron en un todo armónico focalizando la información. Las relaciones entre estas disciplinas interrelacionadas son mostradas en un mapa de esquema de actuación, donde los asuntos básicos son presentados como un cuerpo central (core) con las áreas relacionadas a su alrededor.

De esta manera, el ISA, como publicación que indexa y resume la literatura mundial en Ciencia de la Información trata esta área como un campo interdisciplinar que comprende conceptos teóricos y prácticos, y también las tecnologias, leyes, la indústria que trata con la transferencia del conocimiento y sus fuentes, generación, organización, representación, procesamiento, distribución, comunicación y usos de la información, como también la comunicación entre usuários y su comportamiento cuando ellos buscan satisfazer sus necesidades de información.

Con relación a la diferencia entre Bibliotecología y la Ciencia de la Información, afirman la estrecha relación entre las dos, y presentan diferencias entre puntos de vista y no concluyen el tema, evidenciado las relaciones de estas áreas y sus respectivos asuntos temáticos.

Los tópicos relacionados con Bibliotecología son los Archivos; Edificios; Exposiciones; Muebles; Organización de Bibliotecas; Usos de Biblioteca y Usuários; Préstamos; Administración, Presupuestos y Finanzas; Materiales; Microformas; Museos; Materiales no Impresos; Obras raras y antiguas;

Promociones; Remociones; Tipos de equipo de la biblioteca; Usuários (vários tipos); Vehículos; Bibliotecología mundial.

Los tópicos relacionados con la Ciencia de la Información son: Inteligencia Artificial, Sistemas Inteligentes; Investigación básica en Ciencia de la Información; Ciencias Comportamentales; Lógica fuzzy / Investigación fuzzy; Indústria de la Información / Mercadeo de la Información; Profesionales de la Información; Aspectos técnicos de las Tecnologías de la Información (Computación, Internet, Telecomunicaciones); Leyes / Legislación / Regulamentación; Procesamiento de Lenguaje Natural; Lectura (Alfabetización); Bases de Datos de tópicos; Tipos de Literatura.

A pesar de la presentación gráfica en el mapa del articulo mostrar con claridad las interrelaciones de la Ciencia de la Información, en la conclusión del artículo, se alerta que la delimitación de esos limites es dinámica, pues no se puede ignorar los cambios que ocurren en todos los aspectos.

Las interrelaciones entre estas dos disciplinas son mostradas en un esquema de actuación, donde los asuntos básicos son presentados como un cuerpo central (core) con las áreas relacionadas a su alrededor. El cuerpo central de la Ciencia de la Información abranca: Propriedades de la Información; Acceso a la Información; Industria de la Información / Mercado / Actores; Organización del Conocimiento; Publicación; Marketing de la Información / Economía; Producción de Bases de Datos; Sistemas de Información Electrónica; Investigación on-line; Sumarios diários; Diseños de Bases de Datos; Historia.

Otras áreas relacionadas son: Tecnología de la Computación (Software / Hardware; Existencias; Correo electrónico; Multimídias; Gestión de Documentos; Seguridad, Control de Acceso; Reconocimiento de Voz; Traducción vía Máquina; Inteligencia Artificial, Sistemas Inteligentes; Lógica fuzzy, NLP; Internet y Web): Legislación – Gobierno (Derecho Autoral; Otras áreas Privadas; Contratos); Comunicación (Discurso; Texto; Video; Otros; Editoración; Escrita); Otros Tópicos o Disciplinas (Cobertura de la Información; Negocios; Bases de Datos; Asuntos - Estratégias específicas de Investigación; Biología, Química, Educación, Ingenería, Derecho, Medicina, Física,...); Telecomunicaciones (Redes; Equipamentos; Tecnologías de Telecomunicación; Regulamentación,...); Estadística (Bibliometría y otras áreas; Cientometría, Análisis de Citaciones); Bibliotecología (Tipos de Bibliotecas / Sistemas; Consorcios; Redes; Educación y Entrenamiento; Bibliotecas Digitales; Operaciones en Bibliotecas; Gestión de Bibliotecas; Recursos Humanos; Edificios / Muebles); Ciencias Comportamentales (Ergonomia; Interfase Hombre y Máquina; Factores humanos; Psicología).

Así, los profesionales de la información se ponen adelante de la constante evolución de los conceptos relacionados con la própia información.

Es posible distinguir un ejemplo para esclarecer, de forma simplificada esa cuestión. Si partimos de un número, por ejemplo: 12 , si escribimos apenas 12, tenemos un dato que nos da una cierta dimensión, aunque no contextualizada. Si escribimos: - 12 niños - , podemos entender mejor y visualizar una información, admitiéndose que estamos hablando de personas de corta edad, pues se tratan de niños y no de adultos. Si este dato 12, de modo estructurado, indicando 12 niños, puede ser interpretado como una información, cuando es conocido el contexto de esta información, como por ejemplo, si estuvieramos hablando de: 12 niños que juegan en el patio del colégio, se podrá indicar el conocimiento de una determinada situación, pues, según la interpretación de cada individuo, de su própia vivencia y experiencia podrá tener un significado más o menos completo y complejo, conforme el entendimiento del contexto mencionado.

Esta cuestión es ampliada, cuando nos referimos a los usuários del sector de información, pues ellos se dirigen a las unidades de información en busca de respuestas para sus preguntas, que pueden variar de las más simples a las más complejas. Pueden estar buscando de un dato, de una información o de conocimiento para los más diversos usos, en las más diversas circunstancias.

Paralelamente a esa situación, referente a la extensa variación de las necesidades e intereses de cada individuo, ocurre la constante evolución en todas las áreas del conocimiento. Vivimos en un mundo de cambios bajo todos los aspectos. Cada asunto a ser tratado, invariablemente no se agota con el estudio de una sola área del conocimiento humano y acaba abordando algun tópico o tópicos de otras áreas. Si las fronteras del estudio de la información son volátiles, esta dificultad también contribuye en la complicada delimitación de la área de estudio de la Ciencia de la Información y de su identidad para definir el profesional de esta área de atuación.

Más allá de esta complejidad, y asimismo, el sector de información es integrado por diversos tipos de organizaciones, que pueden ser consideradas unidades de información, como las bibliotecas, centros y/o servicios de información y/o documentación, o otras diferentes organizaciones ligadas a la oferta y demanda de productos y servicios de información, en diferentes formas de actuación y niveles de extensión. En ese mismo contexto, pueden ser considerados los archivos y museos, que también cuidan de documentos y piezas en diferentes tipos de soporte de información, que quedan bajo la responsabilidad de los archiveros y museólogos, también considerados profesionales de la información, hermanos de profesión de los bibliotecários.

La Archivologia y la Museologia, por lo tanto, se integran al contexto relacionado con la información. Por la semejanza de esas áreas con la Bibliotecología, vários estudiosos se han preocupado con la possibilidad de armonizar esas áreas, en el intento de organizar un programa de estudio común, que facilite la formación de los profesionales de la información.

A pesar de toda la diversidad contextual, las unidades de información deben existir en función de las exigencias de los usuários que pretende atender, que asimismo son los indivíduos que integran la sociedad. Por lo tanto, esas organizaciones también sufren transformaciones para acompañar el contexto en que están inseridas.

Las funciones básicas de los servicios prestados por las unidades de información han enfatizado la preservación, organización y difusión. Através de los tiempos, las formas de desempeño de esas actividades y el uso de la información se modifican, por lo tanto, la formación del profesional actuante en el sector de información necesita acompañar esos cambios.

De esta forma, es esencial el entendimiento de los factores de influencia en ese contexto para que la formación de los profesionales de la información, como también la conceptuación y la fundamentación filosófica de la Ciencia de la Informação asuman especial significado para la compreensión de este escenário.

En el estudio conceptual y filosófico del contexto evolutivo de la própia información en la sociedad, en relación a las transformaciones que ocurren, nos deparamos con la múltipla terminología, reflejando la complejidad del tema.

Desde los primórdios de la Ciencia de la Información, en la década de 60, hasta el momento, la Bibliotecologia y la Ciencia de la Computación mantiene con la Ciencia de la Información un ejercício interdisciplinar permanente. Pinheiro (1999) asegura que "esas relaciones son tan fuertes, que hacen que ambas sean muchas veces incorporadas al nombre Ciencia de la Información o con esta sean confundidas. La nomenclatura de la área, aunque consolidada como Ciencia de la Información, principalmente en los Estados Unidos, algunas veces tiene a su nombre acoplada la Bibliotecologia, lo que puede ser la prolongación de los lazos originales con la Documentación. Asimismo, esta posición parece equivocada, a la medida que la Documentación surge de la separación con la Bibliotecologia y por lo tanto, nace de la divergencia. Esto no significa negar las relaciones interdisciplinares con esta disciplina, más afirmar la independencia científica de la Ciencia de la Información, con su própio estatuto científico."

Apesar de la polémica de origen epistemológica, o paralelamente a ella, la polémica terminológica es larga y son muchos los adeptos de que los términos deben ser modificados para que la evolución sea acompañada. Considerada bajo esta óptica, es seguro que los títulos o nombres deben cambiar, pero sólo esto no es suficiente. Es necesario realizar la verdadeira transformación, como resultado de la adaptación a la evolución ocurrida. Más de lo que cambiar los nombres de las universidades, departamentos y asignaturas debe ser considerado la concepción filosófica de las funciones y misión del profesional de la información del futuro. (Miranda y Barreto, 2000)

Según Saracevic apud Miranda y Barreto (2000), la Ciencia de la Información es interdisciplinar por su naturaleza, está inexorablemente asociada con la tecnología de la información y, como otras áreas del conocimiento, es una actividad participante de la evolución de la sociedad de la información.

De acuerdo con Ingwersen (1992) una questión recurrente en la literatura ha sido la búsqueda de la identidad, en la tentativa de establecerse un núcleo de áreas de investigaciones en Ciencia de la Información, delimitando sus fronteras con otras asignaturas.

Oliveira (1998, p. 30) observó que esta búsqueda de identidad llevó a la Ciencia de la Información "a várias tentativas de fundirse teoricamente con otros campos, de forma a ocupar posição científica."

En la opinión de Mueller (2000), a pesar de todas las dudas, imperfecciones e indefiniciones, la Ciencia de la Información ha avanzado y aumentado su conocimiento acumulado y aprendido con sus dificultades y fracasos. Ella relata que en Finlandia, en 1990, en un encuentro que reunió vários teóricos para discutir los conceptos de la Ciencia de la Información y fueran destacados las seguientes tendencias en la literatura de la área: (1) cambio acentuado del objetivo en las investigaciones, de documentos para textos y para información transformada en conocimiento; (2) cambio dramático de objetivos centrados apenas en la tecnologia para objetivos englobando toda la dimensión humana.; (3) cambio en la concepción de información como puramente científica para la información entendida en sentido amplio; (4) ninguna separación entre tener el acceso y poder usar, pero con la visión de estos dos procesos en conjunción

Miranda y Barreto (2000) afirman que "las nuevas tecnologias están cambiando los paradigmas de la ciência como un todo, aproximando las áreas del conocimiento, transfiriendo la experiencia de unas áreas supuestamente más "avanzadas" para otras en estadio menos expresivo y promoviendo una racionalización y sistematización global de todo el proceso investigativo." Según los autores, "la dicotomia entre lo "teórico" y lo "práctico" empieza a perder sentido en una práctica científica en que no es más posible y no hay más sentido en esa diferencia, pues ellas sólo funcionan en conjunto."

La Ciencia de la Información es un campo científico nuevo.

Para retractar la realidad latinoamericana sobre la investigación de la Ciencia de la Información sería necesário un examen de los datos sobre cada país, indicando los tipos de organizaciones relacionadas con la formación y actuación profesional como las escuelas y los cursos de Bibliotecología, Archivología, Museología y Ciencia de la Información y sus respectivos grados académicos de la formación del bibliotecológo, o de forma mas amplia, del profesional de la información; las asociaciones profesionales, las juntas, colégios y federaciones, las sociedades científicas y otros tipos de organizaciones existentes en cada país, además de los datos referentes a la infraestructura distinta de cada país. Deberían ser indicadas las políticas de fomento y financiamiento para el desenvolvimiento de investigaciones, los recursos financieros destinados para este tipo de investigación y los projetos desenvolvidos; los recursos informacionales disponibles en las bibliotecas y otras unidades de información, los recursos tecnológicos disponibles en laboratórios para el acceso a las bases de datos a la información general; el estado de la arte de la investigación, con la indicación de los grupos de investigación actuantes; los periódicos y publicaciones científicas; los eventos científicos realizados. Tal investigación sería de gran utilidad al presentar el mapeamento del estado de la arte latinoamericano de la formación del profesional de la información.

Algunas obras de referencia existen y pueden ser consultadas sobre esa delimitación, algunas publicaciones ajudan en esa búsqueda y la propia investigación via Web podría presentarnos esta realidad. Por lo tanto, la dimensión amplia de esta abordaje demandaría un grande esfuerzo y tiempo de ejecución incompatibles para ser realizada apenas por la autora de este estudo. Además de las dificuldades previsibles de un examen de esta naturaleza, sería necesário un conocimiento más detallado de la realidad específica de cada país para que se pueda realizar un trabajo de contenido actualizado y confiable. Así, se presenta un relato específico de la realidad de la investigación en la Ciencia de la Información en Brasil, ya que por ser brasileña y actuar en al ambito académico, la autora del presente trabajo tiene experiencia y conoce el tema abordado.

REALIDAD BRASILEÑA

En Brasil, el paradigma de la Ciencia de la Información de los años 50 comprendía la noción del proceso que envuelve el movimiento de la información en un sistema de comunicación humana. "Este paradigma evidencia particularmente el flujo de la información que ocurre en el sistema donde los objetos de representación del conocimiento (documentos) son buscados y recuperados en respuesta a la pregunta iniciada por el usuário. Eso presupone grande extensión de asuntos específicos implicando también procesos específicos – por ejemplo – la creación y crecimiento del volumen de documentos en la sociedad, la organización y recuperación de esos documentos y/o de su representación y también su uso." (Oliveira, 1998, p. 36)

En seguida, los brasileños presenciaron una etapa de estudios y experimentos con la bibliometría, cuando en el Instituto Brasileño de Información en Ciencia y Tecnologia (IBICT), principalmente entre 1970 y 1984, actuaron profesores estranjeros notables como Frederic W. Lancaster, Tefko Saracevic y Ingetrout Dahlberg y otros que orientaron diversas tesis, abordando esta temática. (Miranda y Barreto, 2000)

En el estudio sobre esta fase, que continua inspirando otros estudios, Uzbizagástegui Alvarado (1984) encontró 78 trabajos produzidos hasta 1983, de los cuales 39 (50%) corresponden a la aplicación de la Lei de Bradford; 9 (10,3%); 11 (14%) a los estudios de productividad (Lei de Lotka}; 8 (10,3%) a las análises de citaciones y 6 (7.7%) a las aplicaciones de la Lei de Zipf. En los años seguientes hubo la continuación en las aplicaciones de la Lei de Goffmam, Frente de las Investigaciones y Obsolescencia y, adicionándose al elenco, derivado de las mismas preocupaciones, los colégios Invisibles. (Miranda y Barreto, 2000).

Miranda y Barreto (2000) observan que también influye de sobremanera en la diversificación de los temas y métodos de investigación entre los brasileños, la formación de cuadros póstgraduados, en niveles de especialización, maestría y doctorado en el Exterior, a partir de la década de 50, con un significativo número de bolsistas en Inglaterra y en los Estados Unidos da América, en las décadas de 70 y 80.

La póstgraduación en Ciencia de la Información en Brasil surgió en la década de 70, como puede ser observado en la seguiente figura.

UNIVERSIDAD	PROGRAMA / CURSO	FECHA DE CREACIÓN DE LA MAESTRÍA	FECHA DE CREACIÓN DEL DOCTORADO
Universidad Federal de Rio de Janeiro / Instituto Brasileño de Información em Ciencia y Tecnología (UFRJ/IBICT)	Programa de Póst-Graduación en Ciencia da la Informação	1970	1994
Universidad de San Pablo (USP)	Programa de Ciencias de la Comunicación y Documentación	1972	1992
Universidad Federal de Minas Gerais (UFMG)	Programa de Póst-Graduación en Ciencia de la Información	1976	1997
Universidad Federal de Paraíba (UFPB)	Maestría en Bibliotecología y Ciencia de la Información	1977	-
Pontificia Universidad Católica de Campinas (PUCCAMP)	Curso de Maestría en Ciencia de la Información	1977	-
Universidad de Brasilia (UnB)	Programa de Póst-Graduación en Ciencia de la Información	1978	1992
Universidad Estatal de Sao Paulo (UNESP)	Maestría en Ciencia de la Información	1998	-
Universidad Federal de Bahia (UFBA)	Maestría en Información Estratégica	1998	-

Fonte: Pinheiro, 2000

Figura 1: Cursos y programas de póst-graduación en Ciencia de la Informaçión en Brasil

Además de los programas y cursos mencionados, funcionan en Brasil algunos otros cursos de póst-graduación relacionados con la área de la Información, sin embargo no considerados por el Comité de la Ciencia de la Información oficial del país, de acuerdo con el Instituto brasileño, la Coordinación de Perfeccionamiento de Personal de Nivel Superior (CAPES) del Ministério de la Educación y Deportes, tanto como:

- Maestría en Memória Social y Documento, implantado en 1988 en la Universidad de Rio de Janeiro (UNIRIO);
- Maestría en Comunicación e Información, creado en 1996, en la Universidad Federal del Rio Grande do Sul- (UFRGS);
- Maestría en Comunicación, Imagen e Información, de la Universidad Federal Fluminense (UFF); fundado en 1997; y
- Maestría en Comunicación, Información y Sociedad, implantado en 1998 en la Universidad Federal de Pernambuco (UFPE).

Además de esos, está en etapa de tramitación para ser autorizado, la Maestría en Ciencia de la Información de la Universidad Federal de Santa Catarina (UFSC).

Pinheiro (2000) observó que la década de 90 marcó la modificación en la denominación de los Programas de Póst-Graduación brasileños, que pasaron a registrarse con la denominación de Ciencia de la Información. En 1991, lo de la Universidad Federal de Minas Gerais Universidad Federal de Minas Gerais, lo de la Universidad de Brasília y lo de la Universidad de San Pablo; en 1995, lo de la Pontificia Universidad Católica de Campinas y, en 1997, lo de la Universidad Federal de Paraíba. Apenas el Programa de la Universidad Federal de Rio de Janeiro / Instituto Brasileño de Información em Ciencia y Tecnología fue iniciado con la denominación de Ciencia de la Información.

Los programas y cursos en Póst-Graduación contribuyeron para la formación de 848 maestros y 65 doctores en Ciencia de la Información hasta el año de 2000, conforme las aprovaciones de las respectivas tesis de maestría y tesis de doctorado, presentadas en la figura seguiente por la orden decreciente de los programas evaluados por la CAPES en Brasil.

UNIVERSIDAD	TESIS DE MAESTRÍA APROBADAS	TESIS DE DOCTORADO APROBADAS
UFRJ – IBICT	305	15
PUCAMP	156	-
UNB	109	18
UFMG	115	2
UFPB	104	-
USP	58	30
UFBA	1	-
TOTAL	848	65

Fuente. Pinheiro, 2000

Figura 2: Tesis de maestría y de doctorados aprobadas por los programas/cursos de póst-graduación en Ciencia de la Información en Brasil

Oliveira (1998) apunta entre las posibles causas para el florecimiento y el desenvolvimiento de investigaciones en Ciencia de la Información en Brasil:

- surgimiento y consolidación de los cursos de póst-graduación;
- madurez provocada por los nuevos doctores;
- formación de censo crítico;
- mayor inversión en investigaciones;
- mayor rigor del CNPq en el julgamiento de los procesos;
- aparato de las tecnologias emergentes;
- consolidación de las lineas de investigación.

En la primera fase de su desenvolvimiento en el Brasil, la investigación en Ciencia de la Información, de acuerdo con Miranda y Barreto (2000) estaba comprometida con la solución de problemas de la indústria de la información emergente causados por la explosión de la información y, en efecto, con el fenomeno del conocimiento registrado. La Ciencia de la Información se ocupaba, de preferencia, con los problemas relacionados con el llamado "Mundo 3" de Karl Popper, enfocando sobre todo la producción científica, los productores y usuários, es decir, el llamado ciclo informativo, las existencias informacionales resultantes y sus interrelaciones con otras asignaturas. Era la época de las "leyes", desde los pioneros Lotka, Zipt y Bradford hasta las "leyes" de la producción científica de Mikhailov & Giljarevsky.

Miranda y Barreto (2000) afirman que con la proliferación de las bases de datos, inclusive las textuales, el surgimento de bibliotecas virtuales, el avance en la aplicación de la inteligencia artificial y el surgimiento de sistemas especialistas y de los simuladores, la investigación parece estar fluyendo para cuestiones más relacionadas con las tecnologias, con la interactividad, la ergonomía, interconectividad, el cooperativismo, la selección automática y el filtro de datos. Cuestiones tan recurrentes como "centralización versus descentralización", "lenguajes naturales versus lenguajes artificiales", "disponibilidad versus accesibilidad", "existencias reales versus existencias virtuales" y otros tantos están siendo superados, dando espacio a nuevas indagaciones concernientes a los nuevos comportamientos "tribales" de comunidades (ya no apenas científicas) de usuários, a los meta datos, a los anotadores de búsquedas en vocabulários sin controle previo. Holismo, teoría del caos, multidisciplinaridad, técnica fuzzi, privacidad, derechos autorales en la Internet son temas que andan por todas las áreas y pasan también por la Ciencia de la Información con mayor frecuencia.

Los autores (Miranda y Barreto, 2000) defienden que los temas de investigación no se restringen más a la información científica, sino a todo y cualquier tipo de información, lo que, en última análisis, pasa a ser el mismo problema, con diferentes abordajes, para todas las demás áreas del conocimiento. De eso porque, hoy, los limites de la investigación en la área de la Ciencia de la Información se presenta tan elásticas e indefinidas, originando tanta perplexidad y hasta angustia, en una significativa crisis de identidad. Más esta es la situación también de todas las demás áreas del conocimiento, de las más antíguas a las más recientes – y cuando más antígua tal vez con mayor perturbación, pues esa crisis parece ser la esencia de la nueva ciencia que estamos vivenciando.

En el IV Encuentro de la Asociación Nacional de Investigación y Post-graduación en Ciencia de la Información, realizado de 6 hasta 10 de noviembre de 2000, en Brasília, Brasil, Pinheiro (2000) presentó un estudio sobre la infraestructura de la investigación brasileña en la Ciencia de la Información, a partir de las políticas de Ciencia y Tecnología de información, considerando la naturaleza de la área como campo del conocimiento. Programas y cursos de Post-graduación, grupos de investigación, el fomento a la investigación y a los recursos financieros para diferentes categorías de auxilio, la divulgación de investigaciones através de periódicos y eventos técnico-científicos, los recursos bibliográficos proporcionados por las bibliotecas y centros de información, el acceso a las bases de datos especializadas, así como Laboratorios, infraestructura tecnológica que estimule el proceso de comunicación e información.

La constitución de grupos de investigación en Ciencia de la informaciön fue presentada por Pinheiro (2000) como un indicador importante en la evaluación de la infraestructura de investigación de la área, pues representa la institucionalización de la investigación, en el conjunto de las grandes áreas categorizadas por el Consejo de Desenvolvimiento Científico y Tecnológico (CNPq) del Brasil, donde la Ciencia de la Información está incluída en la área de las Humanidades, y que representan 28% del total, con 3.144 grupos de investigación. Las Ciencias Sociales Aplicadas agrupan 901 grupos, correspondiendo a 8% de los grupos de investigación de las Humanidades.

Los registros de grupos de investigación 2000 del CNPq pueden ser apreciados en la figura 3, que muestra su distribución según las grandes áreas del conocimiento.

GRANDES ÁREAS DEL CONOCIMIENTO	GRUPOS DE INVESTIGACIÓN	%
Ciencias Naturales	**3.518**	**31**
Ciencias Exactas y de la Tierra	2.063	18
Ingenería y C. de la Computación	1.455	13
Ciencias de la Vida	**4.651**	**41**
Ciencias Biológicas	1.668	15
Ciencias de la Salud	1.672	15
Ciencias Agrárias	1.311	12
Humanidades	**3.144**	**28**

Ciencias Humanas	1.675	15
Ciencias Sociales Aplicadas	901	8
Lingüística, Letras y Artes	568	5
Total	**11.313**	**100**

Fuente: CNPq. Grupos de Investigación < online>

Disponible en la Internet : URL:http://www.cnpq.br/gpesq3/dgp4/grupos/tab4.htm

Figura 3: Distribuición de los Grupos de Investigación brasileños según las grandes áreas del conocimiento

En el esquema de las Humanidades están inseridas las Ciencias Sociales Aplicadas, incluyendo la Ciencia de la Información, Administración, Arquitectura y Urbanismo, Comunicación, Demografía, Economía, Derecho, Economía Doméstica, Geografía, Museología, Planificación Urbana y Regional y Turismo. Isoladamente, la Ciencia de la Información presenta 62 grupos de investigación, equivalentes a 0,55% del total general y a 6,88% de los grupos de Ciencias Sociales Aplicadas.

Estos datos, no obstante no sean expresivos, comparados al número de investigadores de la área, pueden indicar la emergencia de la Ciencia de la Información, que aunque en consolidación, evidencia la institucionalización de la investigación y su desenvolvimiento.

Con relación a los periódicos científicos brasileños de esta área, el número de títulos es insipiente (n=12). Algunos títulos están disponibles apenas en la versión impresa en papel (n=3). Pocos títulos (n=7) son encontrados en las dos modalidades, es decir, en la versión impresa en papel y on-line, aunque tres de ellos no disponibilizen el texto integral de los artículos publicados. Apenas dos títulos son disponibilizados solamente en la versión electronica on-line.

TÍTULO	EDITOR	LOCAL	FECHA DE INÍCIO	PERIODICIDAD	DISPONÍBLE	URL
B & C Revista de Biblioteconomia & Comunicação.	UFRGS/ Faculdad Bibliotecología Comunicación.	Porto Alegre	1986	Irregular	Apenas en papel	
Ciência da Informação	IBICT	Brasilia	1972	Quadri-mestral	En papel y on-line	www.ibict.br/cionline
DataGramaZero	Instituto de Adaptación e Inserción de la sociedad de la Información	Rio de Janeiro	1999	Bimestral	Apenas on-line	www.dgz.org.br www.dgzero.org
Encontros Bibli	UFSC/	Floria-nópolis	1996	Irregular	Apena on-line	www.ced.ufsc.br/bibliote/encontro/
Iinformare: Cadernos do Programa de Pós–Graduação em Ciência da Informação	IBICT/ Departamento de Enseñanza e Investigación	Rio de Janeiro	1995	Irregular	Apenas en papel	
Informação & Informação	Universidad Estatal de Londrina/	Londrina	1996	Semestral	Em papel e on-	www.uel.br/ceca/cinf

	Departamento de Ciencias de la Información				line	
Informação & Sociedade : Estudos	UFPb/ Departamento Bibliotecología Documentación PG	João Pessoa	1991	Semestral	Em papel e on-line	www.informacaosociedade.ufpb.br
Perspectivas em Ciência da Informação	UFMG./Escuela de Ciencia de la Información	Belo Horizonte	1996	Semestral	En papel e on-line	www.eb.ufmg.br/pci/default.htm
Revista ACB : Biblioteconomia em Santa Catarina	Associação Catarinense de Bibliotecários	Florianópolis		Irregular	En papel e on-line	www.ced.br/bibliote/acb/publicacao.html
Revista de Biblioteconomia de Brasília.	ABDF e UnB/ Departamento de Ciência da Informação e Documentação	Brasilia	1973	Semestral	En papel e on-line	www.livroonline.com.br/rbb
Revista Brasileira de Biblioteconomia e Documentação	FEBAB	São Paulo	1973	Irregular	Apenas en papel	
Transinformação	PUCCAMP/Pós Graduação Bibliotecología	Campinas	1989	Quadrimestral	En papel y on-line	www.puccamp.br/transinformacao/welcome.html

Fuente : Chaim, R.M. (2001)

Figura 4 . : Periódicos brasileños en Ciencia de la Información

La responsabilidad de la edición de grande parte de los títulos están ligados a los Programas y cursos de Post-graduación, demonstrando el interés de los investigadores brasileños de la área en mantener estos importantes canales de comunicación con la comunidad científica. Por otro lado, observa Pinheiro (2000) que, entre los artículos publicados, es pequeño el número de los que presentan resultados de investigación. El hecho puede estar relacionado al volumen poco expresivo de la productividad científica de investigaciones brasileñas de la área.

Con relación a la infraestructura tecnológica, ni todos los Programas y Cursos de Póst-graduación disponen de Laboratórios exclusivos para las actividades de ensino e investigación, como es el caso de los cursos del Universidad Federal de Rio de Janeiro / Instituto Brasileño de Información em Ciencia y Tecnología y del Programa de la Universidad de Brasília que tienen laboratórios exclusivos para las actividades de enseñanza e investigaciones. Los demás disponen de esas tecnologías de modo compartido con otros Cursos de la Universidad.

Todos los Programas y Cursos cuentan con acceso a Internet, utilizando como principal recurso el correo electrónico, seguido de lista de discusión y teleconferencias.

En complemento al panorama de la Ciencia de la Información en Brasil presentado, es necesario esclarecer que los profesionales de la información son formados en nivel de graduación en Bibliotecología. Luego, de modo simplificado, podemos entender que, en Brasil, la Bibliotecologia engloba la formación básica de bibliotecário, asimismo a nivel de formación stricto sensu en Ciencia de la Información son formados como profesionales de la información todo y cualquer profesional de nivel superior y no apenas el bibliotecário.

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Venciendo paulatinamente las dificuldades que se presentan, la Ciencia de la Información en Brasil va alcanzando su tiempo de consolidación en el mundo contemporáneo, bajo la égida de la Sociedad de la Información, uno de los más recientes programas del gobierno, vinculado al Ministerio de Ciencia y Tecnología. El Programa Sociedad de la Información fue instituído en deciembre de 1999, integrando un conjunto de proyectos del Plano Plurianual 2000 -2003, con recursos de la orden de 3,4 billones, oriundos del Gobierno, incluyendo Estados y Municipios, de fondos sectoriais, del empresariado y de abdicación fiscal. Tiene dos objetivos principales: "articular, coordinar y fomentar el desenvolvimiento y la utilización segura de servicios avanzados de computación, comunicación e información y sus aplicaciones en la sociedad, mediante la investigación, desenvolvimiento y enseñanza..." y "fornecer, de esta manera, subvención para la definición de una estrategia para concebir y estimular la inserción adecuada de la sociedad brasileña en la Sociedad de la Información". (Sociedade, 2000).

Entre sus méritos está aquel de reunir y articular aciones de comunicación, información y computación, en general abordadas isoladamente en la planeficación gobernamental, y la preocupación con la socialización del conocimiento e información y apropriación social de tecnologías.

En la elaboración del Libro Verde, reuniendo las líneas de acción del Programa, participaron numerosos especialistas de las más diferentes instituiciones, constituyendo los seguientes Grupos de Trabajo : Administración pública, Acciones empresariales, Contenidos e identidad cultural, Cooperación internacional, Divulgación a la sociedad, Educación, Infraestructura de red y backbones, Integración y regionalización, Investigación y desenvolvimiento, Planificación, Procesamiento de alto desempeño y Trabajo.

El Programa pretende alcanzar la "efectiva participación social, sustentáculo de la democracia política y promover la instrucción básica en Informática, en la llamada " alfabetización digital", bien como servicios para la ciudadania. (Sociedade, 2000)

Por lo tanto, se espera que los Programas y Cursos de Póst-graduación en Ciencia de la Información brasileños desarrollen sus actividades de modo a acompañar la evolución esperada para su sociedad.

CONSIDERACIONES FINALES

Delante de la realidad brasileña en la área de Ciencia de la Información y al mismo tiempo llevando en consideración la diversidad latinoamericana, que aunque no retractada en este trabajo puede ser imaginada por la especificidad, complejidad y diversidad de las similaridades y contrastes de la región, es possíble pensar en cooperación.

Si existen diversas realidades, las experiencias bien sucedidas pueden ser aprovechadas por los que todavía no alcanzaron el mismo estadio de desenvolvimiento, desde que resguardadas las especificaciones de cada país, sean las relativas al país más desarrollado, sean las referentes a los países menos desarrollados. Además, es necesario identificar y firmar acuerdos de los intereses de todas las partes.

A pesar de todas las dificultades que puedan surgir, el compartir es la palabra de orden del contexto en que vivimos.

Para ilustrar la propuesta, se toma como ejemplo el acuerdo de cooperación, que ahora está siendo firmado entre los rectores de las universidades brasileña y mexicana, por Brasil, la Universidad de Brasília (UnB), y por México, la Universidad Autonóma de México (UNAM).

Este acuerdo visa acrecentar las relaciones académicas, impulsar y auspiciar estudios de póst-graduación, que aumentará la oportunidad del avance científico y tecnológico de sus graduados, así como las funciones de cátedra e investigación.

La finalidad es fomentar la colaboración entre las dos universidades, como asimismo, realizar, en conjunto, actividades académicas, científicas y culturales en las áreas de interés común. Las responsabilidades de cada universidad son definidas legalmente en el instrumento del respectivo acuerdo.

El acuerdo es amplio. Se puede extender la cooperación entre las universidades para otras áreas, además de la Ciencia de la Información, desde que exista interés y manifestado como tal.

De esta forma, en el ámbito de la Ciencia de la Información, se podrá desarrollar investigaciones en conjunto, así como el desenvolvimiento de proyectos de cátedra e investigación, todo esto estimulando a la formación de equipos mixtos de trabajo. Será facilitado y podrá ser ampliado el intercambio de personal académico con las finalidades de cátedra, investigación, de asesoramiento o para compartir experiencias de trabajo. Las facilidades para incentivar e intensificar este acuerdo se puede concretizar también, con el intercambio de estudiantes para realizar estudios de póst-graduación o prácticas de investigación orientados para la obtención de diploma. Además de eso podrá ser intensificado el intercambio de información, documentación, publicaciones y otros materiales, porque, aunque los idiomas oficiales de los dos países no sean los mismos, la relativa facilidad de compresión, neutraliza los grandes problemas del obstáculo lingüístico.

Las realidades brasileña y mexicana en el ámbito de la Ciencia de la Información, principalmente en lo que dice al respecto de la investigación, son diferentes, pero el intercambio de experiencias entre los países podrá ser provechoso para las dos partes.

Así como Brasil y México, otros países latinoamericanos podrán aprovechar de otros acuerdos, semejante al ejemplo, porque esta iniciativa sólo podrá contribuir positivamente para divulgar y desarrollar la área de la Ciencia de la Información en América Latina y el Caribe.

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Grey Literature and its contribution to Knowledge Society

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Abstract:

In this work the contribution of Grey Literature to Knowledge Society is demonstrated through a historic overview of its evoluton in the last century. The first step is to present some definitions of Grey Literature and then the stages of its development from the begining of the XX Century to current days. The work also mention some institutions that played a key role in the administration of this type of literature, not omitting some important institutions of Latin America and the Caribbean.

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1. INTRODUCTION

Crouched over his table by candlelight, a medieval alchemist is writing a manuscript recounting his discoveries. His intention is merely to produce a written record of his work that he can use as a future reference or for someone else to learn about his research one day and continue his efforts. A thousand years later, a chemical engineer sits down one night at his computer and uses a word processor to note the results of his experiments, which he will then forward to a colleague for review. Despite the centuries between them, they are both driven by the same spirit: discovering universal truths, extending the knowledge of humankind and helping improve the life of their own and subsequent societies. The documents prepared by the two of them would be today rated as Grey Literature (although neither would be aware of this, the alchemist because this term was only coined hundreds of years after his time, and the latter because he is a chemical engineer and consequently unfamiliar with terminology that lies more in the field of librarians). This is certainly an odd term, but it follows the European custom of using colors to name different types of documents. It was coined in the late XIX century [22] and became more widely accepted from the 1970s onward in the USA and Europe. In the countries of Latin America, particularly Brazil, it has only come into use far more recently, and is still not widely accepted.

This "literature" consists of documents produced in a somewhat informal manner that carry and store much of the knowledge of humankind. Analyzing its progress from the early years of the XX century through to our own day offers a good idea of its development and how it has contributed to the society in which we live. Unfortunately, constraints on time and space do not allow this analysis to be carried out in a very detailed manner, but I believe that an overview of its development will be sufficient for our purpose. As it progressed, Grey Literature prompted the appearance of countless institutions set up to file, control and distribute its output. I will mention those that seem most important to me in the course of this development process.

2. GREY LITERATURE: WHAT IS IT?

Before starting to examine the development of Grey Literature, we should examine how it is defined by different authors. There are some disputes over its borders, but differences of opinion on which documents may or may not be classified as Grey Literature are not really significant, as these definitions differ very little in their essence.

For Wood, this is "*material that is not available through sale*".[30]

For the "Interagency Gray Literature Working Group", as noted in the Gray Information Functional Plan dated January 18, 1995, "*Gray literature is domestic or foreign ostensive matter that is usually available through specialized channels and that cannot enter the normal channels or publication and distribution systems, nor fall under bibliographic controls or acquisition schemes by book-sellers or subscription agents*". [26]

For Curràs "*Grey Literature may be obtained publicly, as its content is not conventional and its publication is not firmly controlled, and it is not accessible through the normal distribution channels, which makes it hard to locate and obtain. Moreover, these are documents of many different types ranging from unrevised pre-prints through to documents with very concrete content*".[7]

For Población, "*Grey Literature documents are fleeting and transparent (not seen in publishers' catalogs, bookshops, libraries, etc.) that are hard to locate but which in most cases contain relevant and important data*".[22]

At the III International Conference on Grey Literature (GL'97) held in Luxemburg in 1977, Grey Literature was defined as "*that which is produced at all levels of government, academia, business and industry in printed or electronic format, but which is not controlled by commercial publishers*".[1] This definition includes electronic documents for the first time in the universe of Grey Literature.

It is obvious that the common trait running through these definitions is the fact that Grey Literature is neither produced by nor distributed through retail channels. This includes academic works, pre-prints (understood here as research records distributed among scientists prior to formal publication) [20], committees reports, commissions reports, technical reports, government reports, research reports, travel reports, conference papers, technical standards, dissertations, theses, non-commercial translations, market surveys, news bulletins, company documents, working documents, web sites, virtual discussions, data sets, e-mail and electronic simulations [2], memoranda, conference proceedings, technical specifications, bibliographies and maps [19], among others.

This list of documents is not exhaustive, quite naturally, but offers a good idea of the many different types of documents that may be included under the category of Grey Literature. Some of these documents were underlined in the above paragraph in order to draw attention to them, as they are newcomers included in the list after the advent of the Internet during the 1990s and in the GL'97 definition.

It should be noted here that as Grey Literature is not produced commercially, it might be believed that these documents are not trustworthy, as they have not gone through the necessary review processes as those imposed by technical and scientific magazines. This is a mistake, as many GL documents go through review processes that are even more stringent than those imposed by such magazines. For instance, academic works such as dissertations and theses are subject to stringent bench reviews before being accepted, as well as project reports and other similar documents.[3]

3. THE BEGINNING

The development of Grey Literature, reflected in the rising number of documents produced in an "informal" manner and the establishment of entities set up to handle their control and distribution, has kept pace with technological progress over the past century. Scientists eager to disclose their findings in a fast and informal manner have been the driving force behind this process.

At the initial stage, this development seems to have been connected to the Industrial Revolution, fueled largely by the progress of the aircraft industry. Dating back to the early XX century, this stage runs through World War II. It is important to note that the main documents of interest from this period are reports, which is why this class of documents was called "report literature" [17], as the term Grey Literature was only coined many years later, in the 1970s.

4. WORLD WAR II

During this War, tremendous efforts were made by the USA, the UK and Germany in particular to increase research activities in a broad range of fields of knowledge: nutrition, weapons, clothing, vehicles, all types of equipment (optical, electronic, etc.), aircraft, shipping, navigation and others. The demands of the War forced the results of these research projects to be disseminated rapidly to authorized people and centers interested in them. These pressures resulted in a sharp increase in the amount of Grey Literature documents produced and the appearance of entities responsible for disseminating and controlling them. A good example is the US Office of Scientific Research and Development (OSRD), set up in the USA in 1941 to disseminate research results and speed up their application in national defense projects.[4]

5. THE POST-WAR YEARS

a) 1945-1960

During the period after World War II, the appearance of new research institutions involved the progress of Grey Literature with added dynamism, reflected in the appearance of entities specializing in handling information and bibliographic controls. The purpose of these entities was to disseminate information both in-house and elsewhere, underpinning technology transfers.[17] Consequently, the US Office of Scientific Research and Development (OSRD) was replaced by the Publications Board in 1945, which published the first Bibliography of Scientific and Technical Research the following year.

During this period, the thriving nuclear industry boosted the output of Grey Literature. In 1946, the Atomic Energy Act established the Atomic Energy Commission as the successor to the Manhattan Project (which developed the atomic bomb) in order to manage and regulate the use of atomic power. Among its core programs was the declassification of data produced on atomic energy during World War II and the dissemination of documents. (The Energy Reorganization Act abolished the Atomic Energy Commission in October 1974, replaced by two other federal agencies).[3]

During the 1950s, the Space Race between the USA and the USSR served as a springboard for the expansion of Grey Literature. During this period, there was more obvious concern with the retrieval of information, cataloging, filing and information policies to be pursued. Many institutions were set up in several countries – particularly the USA and the UK – in order to handle bibliographic records and information. At this time, the Committee on Scientific and Technical Information (COSATI) was established in order to encourage and coordinate the dissemination of scientific and technical information. [17]

b) 1960-1970

During the 1960s, Grey Literature continued to develop steadily, with new tools for disseminating information, including microfilm and microfiche facilities. Faced with the exponential expansion of Grey Literature documents, the problem of retrieving information grew increasingly critical. This prompted the appearance of the first automatic systems for information retrieval.

During this decade the Lending Division of the British Library (later the Document Supply Center), began to play a leading role in the dissemination of Grey Literature, as it developed in Europe into the main collector and disseminator of reports produced by the US agencies. Later it also became the official depository of documents produced by the European Community.[17]

Countless studies appeared on this topic, including the famous Weinberg Report in 1963 entitled "Science, Government and Information: the Responsibility of the Technical Community and the Government for Transferring Information". Weinberg recommended that institutions be established to gather and disseminate information, highlighting the importance of Grey Literature as a way of disseminating knowledge and transferring technology .[28]

It was also during this decade that the Committee on Scientific and Technical Information (COSATI) appeared in the USA, under the Federal Council for Science and Technology, established in order to coordinate and disseminate technical and scientific information.

I believe that it would be timely here to draw attention to a curious fact. As we have seen so far, Grey Literature was fueled mainly by the physical sciences and technological progress. In fact, it was viewed askance by much of the human and social sciences, as their documents lacked the stamp of approval by highly respected scientific journals. However, it is interesting to note that some marginalized minority groups found their form of expression in Grey Literature. It was in fact through Grey Literature that these groups could disseminate their ideas and publicize them through propaganda. For instance, in her article "Grey literature is a feminist issue: women's knowledge and the Net", Danuzia Malina stressed that for women "... material that is not commercially published has always had an important role in feminism. It played a crucial part in communicating the experiences and ideas of women within a society where their voices and writings have been muffled".[18]

c) 1970-1980

The 1970s saw rising concern over the management of Grey Literature. Studies multiplied on many different aspects such as indexing and cataloging, dissemination and disclosure, data retrieval, etc. The keynote of these concerns was identifying and ensuring access to Grey Literature documents. The first conferences specializing in Grey Literature then began to appear. Particularly significant was the York Seminar held in December 1978 [1], which launched the cooperation between European libraries and documentation centers that was the forerunner of the SIGLE Data-Base, established at a later date. At this seminar, the term "Grey Literature" was officially acknowledged and accepted, coming into use by leading libraries and documentation centers in the USA and Europe.[17]

It is also during the 1970s that on-line databases specializing in Grey Literature began to appear, which were the first to be run on a commercial basis.[17]

In 1970, the US Publications Board became the National Technical Information Service (NTIS), launching the publication of the "Government Report Announcements" as a continuation of the "Bibliography of Scientific and Technical Research".[17] Under the Technology Administration of the Department of Commerce and with economic autonomy, the NTIS grew into the largest and most important US organization specializing in Grey Literature. It is now a leading force of scientific, technical, government, engineering and business information for hundreds of US agencies, offering access to over two million publications covering 350 fields of knowledge. Its mission is to underpin the economic growth of the USA and generate jobs by providing access to information that encourages innovation and discovery.[21]

d) 1980-1990

During the 1980s, the System for Information on Grey Literature in Europe (SIGLE) Database was set up, managed by the European Association for Grey Literature Exploitation (EAGLE), which is a consortium of legal libraries and documentation centers in Europe. The SIGLE multi-disciplinary database stores reports, dissertations and other Grey Literature documents produced in its member countries. Holding over 674,000 records, it can be accessed over the Internet, by CD or hard drive. Its documentation ranges from 1980 through to the present day, accepting from 55,000 new records each year, covering the following fields of knowledge: research and development, science and technology, and economics.[24]

e) 1990 ONWARDS

The 1990s saw the advent of the Internet, the spectacular worldwide communications network. Allied to the rapid spread of personal computers and the widespread dissemination of word processing programs, the Internet triggered explosive growth in Grey Literature. As already mentioned, electronic documents were included under Grey Literature, forming another area of concern for librarians. It was also the decade when international conferences on Grey Literature began to appear, held every alternate year from 1993 onwards.

The Internet met the needs of scientists and other experts to disseminate their knowledge rapidly and learn about studies and research projects underway elsewhere in the world. It also decreased significantly problems in locating and accessing documents. These facilities resulted in a sharp upsurge in the dissemination of knowledge and the possibility of transferring technology far more rapidly. It should be noted that the Internet is not merely a tool for disseminating and accessing documents, but in itself is also a major producer of Grey Literature (the Bibliography of this paper lists some Grey Literature documents that are Web Sites). The Human Genome Project is one of the most spectacular examples of human collaboration through computers, the Internet and Grey Literature.[8]

Towards the end of the XX century and early in the current century, a new phenomenon began to appear. Grey Literature produced by NGOs in the developing countries covers a wide range of topics, including the environment, justice, feminism, indigenous problems, peace and politics, among many others. This Grey Literature is published in full over the Internet. The Zapatista Group in Mexico is one of the most active on the World Wide Web, where other groups are also starting to work towards telling the rest of the world about their ideas.[27]

6. ABOUT LATIN AMERICA AND THE CARIBBEAN

It was not possible to obtain data outlining the development stages of Grey Literature in Latin America and the Caribbean over time. However, the limited amount of data available indicates that it has also kept pace with scientific and technological development in this Region, or more specifically in each country, as development is not uniform for all countries in this Region. Many initiatives have been taken to gather and disseminate this Grey Literature at the level of international entities, as well as government, universities and companies, with a rising awareness of its importance as a factor spurring economic and social development.

Listed below as examples are just a few of these initiatives:

a) BIREME (Health Sciences Information Center for Latin America and the Caribbean) an iniciative run by the Pan-American Health Organization (PAHO). This specialized center has been operating in Brazil since 1967, working closely with the Ministry of Health, the Ministry of Education, the São Paulo State Health Bureau and the São Paulo Federal University. Its mission is to foster the development of healthcare in the countries of Latin America and the Caribbean through promoting the use of scientific and technical information focused on healthcare. It also runs the Health Sciences Literature Data-Base for Latin America and the Caribbean (LILACS - *Literatura Latino-americana e do Caribe em Ciências da Saúde*), which records and disseminates health-sciences literature, published and available in Latin America and the Caribbean. It holds over 150,000 records of articles from periodicals in the healthcare field, in addition to dissertations, theses, books, proceedings of congresses and conferences, technical and scientific reports and government publications produced in the countries of Latin America and the Caribbean, covering information available since 1982. This database is open for access over the Internet on the BIREME website.[5]

The LILACS data-base also includes the following data-bases:

DESASTRES (Information Center on Natural Disasters for Latin America and the Caribbean) which contains bibliographic information on preparations and dealing with natural calamities in Latin America and the Caribbean, Grey Literature and books;

PAHO (Pan American Health Organization) which contains bibliographical references and summaries of the PAHO Library; new materials (conventional or not) and many other items of interest;

REPIDISCA (Pan-American Information and Documentation Network for Sanitary Engineering and the Environment Sciences) bibliographical references from the literature on Sanitary Engineering and the Environment Sciences;

BBO (Brazilian Data-Base on Odontology) with documents published since 1966; dissertations, theses, books, leaflets, separata and periodical publications;

LEYES (Basic Legislation in the Healthcare Sector in Latin America and the Caribbean) contains bibliographical references on healthcare law in effect since 1978;

Ad SAUDE (Healthcare Services Administration) which is an experimental data-base with bibliography in the field of healthcare services administration, containing documents covering political, economic and social aspects, as well as documents related to the management, administration, organization and planning of healthcare systems;

ADOLEC (Adolescent Healthcare) pilot data-base of bibliographical references on adolescence taken from the LILACS data-base and MEDLINE;

SIDORH (Information and Documentation System for Human Resources in Healthcare) promotes and disseminates specialized bibliography on different aspects of human resources and related issues such as social participation, strategic planning, decentralization of healthcare systems and management of healthcare services;

MINCAP (Technical Heritage of INCAP) bibliographical references for works on nutrition by institutions in Central America and Panama (INCAP);

MEDCARIB (Caribbean Literature on the healthcare sciences) literature produced by the English-speaking Caribbean with references to books, theses, dissertations, technical reports, congress proceedings and journal articles from the XVIII century through until today. [16]

b) IBICT (Brazilian Institute for Information in Science and Technology) was established during the 1950s under the National Research and Development Council by the Ministry of Science and Technology, with the mission of fostering the development of the information sector through drafting policies, carrying out research projects and disseminating innovations that underpin the progress of science and endow Brazilian technology with a keener competitive edge. This Institute has many national and international agreements, including within the MERCOSUR (Southern Cone Common Market). It is coordinating a national data network project based on the Internet and called ANTARES, interconnecting over 200 institutions in Brazil over the Internet, including universities, the CNI (National Confederation of Industries) System, the SEBRAE (Micro and Small Business Support Service) as well as many other associations, research institutes and institutions providing information services. The Antares network covers 22 States providing information services. Its purpose is to identify, operate and offer access to databases (bibliographical and with the complete text) available on-line over the Internet, making information available in the field of science and technology to all States in Brazil.[10] The Brazilian Institute for Information in Science and Technology (IBICT) is implementing the Brazilian Digital Library Project, which is a gateway (portal) designed to integrate information services on scientific and technological output in Brazil.

c) INFOLAC (Regional Program for Strengthening Cooperation among Networks and National Information Systems for the Development of Latin America and the Caribbean) was established in 1986 under a Resolution issued by the XXIII General Conference of UNESCO. The Permanent Secretariat of INFOLAC functions out of the UNESCO Information and Information Technology Division for Latin America and the Caribbean in Caracas, Venezuela. Its members include: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Santa Lucia, Trinidad & Tobago, Uruguay and Venezuela.

A forum for exchanging knowledge and experience in the information services area, INFOLAC is open to all types of public, private or professional institutions that are dedicated to providing information services in the Region. It is an inter-governmental forum open to all countries in Latin America and the Caribbean that belong to UNESCO, represented by the respective national information authorities. Its purpose is to run a forum for the discussion and development of ideas on information policies, technologies and services in order to foster sustainable development in Latin America and the Caribbean. It functions as a regional consultative entity for governments, UNESCO and other regional and international organizations in the information services field, integrating and developing the information sector in Latin America and the Caribbean, and promoting more effective regional and international cooperation in the information services area throughout the Region.[12]

Represented by the Brazilian Institute for Information in Science and Technology (IBICT), the Brazilian Government donated the software and methodology for the ANTARES Network to UNESCO, and offered to play a leading role in the process of implementing this system throughout the Region. This gave rise to the idea of the project that was submitted to the INFOLAC Committee for consideration at its regular meeting held in September 1988 in Panama, as well as at the INFOLAC Assembly held in March 1999 at Colima, Mexico, approved by the representatives of the 24 member States of UNESCO that also belong to INFOLAC.[13]

The objectives of the ANTARES network project are to: extend the presence of Latin American and Caribbean culture on the Internet; preserve and disseminate information production services over the Internet for libraries in the countries of Latin America and the Caribbean; establish a technical and methodological cooperation base among the countries in the Region for recording and disseminating information on endogenous Web Pages; foster and train human resources and new information technologies used within the context of this cooperation project; develop an effective search engine for information on all Web Pages in the independent system, regardless of their geographical location.[13]

d) INFOBILA (Latin American Librarianship Information Data Base) first appeared in the Library of the Librarianship Research University Center (CUIB) in 1985 at UNAM, prompted by the its researchers needs for easily-available specialized librarianship literature, together with information on archivology produced in and on Latin America. Right from the start, the CUIB Library accepted the task of setting up the Latin American Library Fund in order to offer access to documentary output in this Region and consequently become more aware of the problems and solutions of each country. The INFOBILA Project was presented during the II Colloquium on Library Automation held in Mexico City in 1986. However, its formal presentation to the professional field took place during the XVII Mexican Librarianship Meetings held this same year in the town of Puebla. This Project is financed by several institutions, including the International Federation of Library Associations and Institutions (IFLA) through the Section for Latin America and the Caribbean (LAC) and its Program for the Advancement of Librarianship (ALP), the National Council for Science and Technology (CONACyT) and the Organization of American States (OAS). Its purpose is to disseminate specialized literature in this field, as well as experiences, problems and solutions found by colleagues in other countries in the Region on the topics of librarianship, archives, information science and other related topics, found in the permanent collections of information units in the cooperating countries in Latin America and the Caribbean. Currently containing 11,686 records, the INFOBILA data-base also offers information on librarianship by Latin American authors who publish in their countries of origin or abroad, as well as by foreign authors who publish information on any country in Latin America and the Caribbean, or authors from this region or foreigners who work with translations, compilations, adaptations and collaborations on librarianship documents related to the Region.[11]

There are many other institutions in other countries in Latin America and the Caribbean, but for reasons of time, I will limit myself to those already listed.

7. PROBLEMS WITH GREY LITERATURE

In order to make it clear that not everything is a bed of roses, it is important before concluding to place on record some of the difficulties that may be found in dealing with Grey Literature.

It is hard to find, identify and access, and frequently is unknown to precisely the people for whom it would be most important.[18]

In Latin America and the Caribbean, particularly in companies but also in other institutions, one of the main difficulties encountered by Grey Literature lies in "production" as our technical staff are not used to recording their expertise or discoveries. Significant discoveries are frequently made that are implemented in the respective institutions, but are not placed on record in a way that allows other sectors in the institution or even the country to benefit. This highlights two severe problems faced by librarians in companies and industries, in terms of convincing technical experts of the importance of recording their discoveries, as well as convincing companies to develop systems preserving their corporate know-how.[6]

8. CONCLUSION

Since ancient times, men and women from a wide variety of origins have recorded their discoveries on parchment, paper and other means, as well as their knowledge, expertise, know-how, intellectual concerns, anxieties and experiences. These documents frequently do not reach the public through normal or conventional channels of disclosure. However, this formidable permanent collection contains a fundamental portion of the knowledge of humankind, and is expanding every day at a spectacular pace thanks to modern communications media. However, this was long rated by many people as a secondary topic.

As I hope this paper has shown, Grey Literature is far from being a secondary topic, as many people once thought and some still believe. In fact, it is of vital importance in the economic and social development process of a country or a region, and this importance is becoming more widely acknowledged. In fact, it is just as important – if not more – than knowledge that is published commercially, as each supplements the other.

A strategic resource that is vital for economic and social development, information joins land, labor and capital as a core production factor. Grey Literature is a means of disseminating information, knowledge and expertise, providing support for research processes and offering information that is not found in more conventional sources, fostering the social and economic development of nations and moving steadily towards the Knowledge Society.

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La literatura gris y su contribución a la sociedad del conocimiento

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Resumen:

A través de un resumen histórico de la evolución de la Literatura Gris en el último siglo se intenta demostrar su contribuición para la Sociedad del Conocimiento. En primer lugar se presentan algunas definiciones de Literatura Gris de autores reconocidos y despues se destacan las etapas de su desarrollo, desde el início del siglo XX hasta los dias actuales. También son mencionadas algunas instituciones que han cumplido un papel importante en la administración de ese tipo de literatura, sin olvidar algunas instituciones de importancia en la América Latina y el Caribe.

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1. INTRODUCCIÓN

Inclinado sobre la mesa, a la luz de la vela, un alquimista de la Edad Media está redactando un manuscrito en el que registra su descubrimiento. No tiene otra intención sino la de dejar escrito su trabajo para que pueda servir de referencia para el futuro o para que alguien un día lo conozca y continúe sus investigaciones. Mil años después un ingeniero químico se sienta, a la noche, en su computadora, para a través de un procesador de texto, escribir el resultado de sus experiencias que enviará después a un colega para que las revise. A pesar del tiempo que los separa ambos están animados del mismo espíritu: el de extraer de la materia verdades universales, avanzando el conocimiento de la humanidad y contribuyendo a mejorar la vida de su sociedad y de las futuras. Los documentos elaborados por ambos hoy serán considerados como Literatura Gris (LG) (si bien ninguno de los dos supiese de ello, el primero porque el término sólo fue acuñado centenas de años después y el segundo porque siendo un ingeniero químico no está muy familiarizado con una terminología propia de los bibliotecarios). La expresión es, sin duda, extraña, pero obedece a la costumbre europea de dar nombres de colores a distintas especies de documentos. La expresión fue acuñada a fines del siglo XIX [22] y ganó aceptación a partir de los años 70 del siglo pasado en Estados Unidos y en Europa. En los países de América Latina, especialmente en Brasil, sólo recientemente se viene empleando si bien aún no tiene aceptación general.

Esta "literatura" constituida por documentos producidos de manera informal, es vehículo y acumula una gran parte del conocimiento de la humanidad. Acompañar sus pasos desde los primeros días del siglo XX hasta nuestros días nos permitirá tener una idea de su evolución y de cómo esa evolución ha contribuido a la sociedad en que vivimos. Infelizmente, limitaciones de tiempo y espacio no permiten presentarla de una manera detallada, pero considero que será suficiente para el propósito actual mostrar las líneas generales de su desarrollo. Como veremos, a medida que evolucionó la Literatura Gris acarreó la aparición de numerosas instituciones destinadas a su archivo, control y distribución. Citaré las que creo más significativas en ese proceso de evolución.

2. LO QUE ES

Antes de iniciar los pasos de evolución de la LG, veamos cómo la definen diversos autores. Existen algunas controversias sobre sus límites, pero las diferencias de opinión sobre qué documentos pueden o no encuadrarse como Literatura Gris no son al fin tan significativas y las definiciones, en esencia, no difieren mucho.

Para Wood es " *el material que no está disponible por venta*". [30]

Para "Interagency Gray literature Working Group" según consta en " Gray Information Functional Plan", del 18 de enero de 1995 "*la literatura gris es el material doméstico o extranjero usualmente disponible a través de canales especializados y que no puede entrar en los canales normales o sistemas de publicación, distribución, control bibliográfico o adquisición por vendedores de libros o agentes de suscripciones.*" [26]

Para Currás "*la Literatura Gris puede obtenerse públicamente, no siendo convencional en su contenido, no estando bien controlada su publicación, ni siendo accesible por los canales normales de distribución lo que la hace difícil de obtener y de localizar. Además de ello son documentos de tipo muy variado, que van desde las publicaciones no revisadas hasta los documentos de contenido no muy concreto.*" [7]

Y para Población "*los documentos de Literatura Gris son documentos fugitivos, transparentes (que no se ven en los catálogos editoriales, librerías, bibliotecas, etc.), de difícil localización, que en la mayoría de los casos contienen datos relevantes e importantes.*" [22]

En la III Conferencia Internacional sobre Literatura Gris (GL'97), realizada en Luxemburgo, en 1977, fue definida como "*aquélla que es producida en todos los niveles de gobierno, academias, negocios e industria en formato impreso o electrónico, pero que no es controlada por los editores comerciales.*" [1].Esta definición incluye por primera vez los documentos electrónicos en el universo de la Literatura Gris.

Es evidente que el trazo común entre esas definiciones es el hecho de que LG no es producida ni distribuida por los canales de comercialización. Ella comprende trabajos académicos, pre-publicaciones [pre-prints] (entendidas aquí como un registro de investigación distribuido entre los científicos antes de su publicación formal) [20], informes (de comités y comisiones, técnicos, gubernamentales, de investigadores y viajeros), trabajos de conferencias, normas técnicas, disertaciones, tesis, traducciones no comerciales, investigaciones de mercado, boletines de noticias, documentos de empresas, documentos de trabajo, "websites", discusiones virtuales, conjunto de datos [data sets], correo electrónico, simulación electrónica [2], memorandos, anales de conferencias, especificaciones técnicas, bibliografías y mapas, [19] entre otros.

La lista de documentos presentados no es exhaustiva, naturalmente, pero da una idea bastante buena de los tipos de documentos que pueden ser incluidos en la categoría de Literatura Gris. Algunos de esos documentos fueron subrayados para llamar la atención, pues son "recién llegados", incluidos en la lista a partir de la llegada de Internet en los años 90 del siglo pasado y de la definición de LG´97.

Puede creerse que por no ser la Literatura Gris producida comercialmente los documentos no merecen confianza, pues no pasan por los procesos de revisión necesarios. Esto es un engaño, pues varios documentos de LG atraviesan muchas veces procesos de revisión hasta más rigurosos que los exigidos por las revistas científicas o técnicas. Por ejemplo, trabajos académicos como las disertaciones y tesis son sometidos a rigurosos exámenes antes de ser aprobados, así como informes de proyectos u otros documentos de la misma naturaleza.[3]

3. EL COMIENZO

La evolución de LG, esto es, el aumento del número de documentos producidos de manera "informal" y el establecimiento de organismos destinados a su control y distribución acompañó el progreso tecnológico verificado en el último siglo. El deseo de los científicos de divulgar sus trabajos en forma rápida e informal fue, por así decir, la causa instigadora, propulsora del proceso.

En la primera etapa, esa evolución, parece estar ligada a la revolución industrial y recibió un impulso particular del progreso de la industria aeronaútica. Esa etapa, iniciada a principios del siglo XX llega más o menos hasta la Segunda Guerra Mundial. Es importante señalar que los documentos de interés en esa época fueron los informes, y por ello esa clase de documentos se llamó "literatura de informes" [7], el término Literatura Gris será acuñado más tarde (por los años 70).

4. LA SEGUNDA GUERRA MUNDIAL

Durante la Guerra el enorme esfuerzo desarrollado, especialmente por Estados Unidos, Inglaterra y Alemania, determinó un considerable aumento de investigaciones en un amplio espectro de campos de conocimientos: alimentación, armamentos, vestuario, vehículos, equipos de toda especie (ópticos, electrónicos, etc.), aeronaútica, navegación y otros. La urgencia de la guerra obligó a que los resultados de las investigaciones se diseminaran rápidamente entre los centros o personas interesadas y autorizadas. Esas presiones llevarán a un notable aumento del número de documentos de GL producidos y a la creación de organismos encargados de difundirlos y controlarlos. Así la fundación en los Estados Unidos de OSRD – US Office of Scientific Research and Development - en 1941, destinado a divulgar los resultados de las investigaciones y a facilitar su aplicación en proyectos de defensa nacional. [4]

5. DESPUÉS DE LA GUERRA

a) 1945-1960

En el período de pos-guerra, la aparición de nuevas instituciones de investigación dio nuevo impulso al desarrollo de LG. Evidencia de ese desarrollo es la creación de organismos dedicados específicamente al tratamiento de la información y del control bibliográfico. Esos organismos tenían el propósito de divulgar interna y externamente las informaciones teniendo en vista la transferencia de tecnología. [17] Con esa finalidad, en 1945, OSRD fue sustituido por "Publications Board", que en 1946 publicó la primera bibliografía de informes técnicos "The Bibliography of Scientific and Technical Research".

La aparición de la industria nuclear en ese período reforzó la producción de LG. En 1946 la Ley de Energía Atómica (Atomic Energy Act) creó la Comisión de Energía Atómica como sucesora del Proyecto Manhattan, que desarrolló la bomba atómica, para administrar y regular el uso de la energía atómica. Entre sus programas principales estaba la desclasificación de los datos producidos sobre energía atómica durante la II Guerra Mundial y la diseminación de documentos (La Ley de Reorganización de Energía, de octubre 1974, abolió la AEC sustituida por dos otras agencias federales.).[3]

En la década del 50, la carrera espacial entre Estados Unidos y la Unión Soviética dio nuevo impulso a la GL. En ese período se tornó más nítida la preocupación por la recuperación de la información, catalogación, archivo y la política de información a seguir. Numerosas instituciones se crearon en varios países, especialmente en Estados Unidos y el Reino Unido, con la finalidad no sólo de tratamiento bibliográfico, sino también de tratamiento de la información. Es en esa época que también se fundó el Comité de Información Científica y Técnica (Committee on Scientific and Technical Information - COSATI) con el fin de incentivar y coordinar la difusión de informaciones científicas y técnicas.[17]

b) 1960-1970

La década del 70 asistió al contínuo crecimiento de la LG. En esa época creció el número de herramientas para la difusión de las informaciones, como los microfilms y las microfichas Frente al aumento exponencial de la producción de documentos de la Literatura Gris, el problema de recuperación de la información se tornó cada vez más crítico. Comenzarán entonces a aparecer los primeros sistemas automáticos destinados a recuperar la información.

Fue en esta década que la Biblioteca Británica (British Library) a través de su División de Préstamo (Lending Division), más tarde Centro de Provisión de Documentos (Document Supply Center), pasó a desempeñar un papel muy importante en la difusión de la Literatura Gris, pues se convirtió en la principal recolectora y difusora de los informes provenientes de las agencias norteamericanas, y más tarde en el depósito oficial de los documentos producidos por la Comunidad Europea [17]

Surgieron numerosos estudios sobre el tema, y entre ellos, el famoso Informe Weinberg (Weinberg Report), de 1963 "Ciencia, Gobierno e Información: la responsabilidad de la comunidad técnica y del gobierno en la transferencia de la información". Weinberg recomendó la creación de instituciones para recoger y difundir la información y llamó la atención sobre la importancia de la LG, como difusora del conocimiento y medio de transferencia de tecnología. [28]

Fue también en esa década que apareció en Estados Unidos el COSATI. Committee on Scientific and Technical Information- subordinado al Federal Council for Science and Technology, con la finalidad de coordinar la diseminación de informaciones técnicas y científicas.

Es oportuno aquí llamar la atención sobre un hecho curioso. La GL, como hemos visto hasta ahora, fue impulsada principalmente por medio de las ciencias fisicas y por el progreso de la tecnología. En realidad, era mirada con desconfianza por las ciencias humanas y las ciencias sociales, pues sus documentos no tenían el sello de las revistas científicas de prestigio. Es interesante señalar, mientras tanto, que algunos grupos minoritarios o marginales encontraron en la LG su forma de expresión. Es a través de la Literatura Gris que esos grupos podían difundir sus ideas y hacer propaganda. Por ejemplo, Danusia Malina en su artículo: "La Literatura Gris es un tema femenino: el conocimiento de las mujeres y la Net" señala que, para las mujeres "... *el material no publicado comercialmente siempre tuvo un importante lugar en el feminismo. El ha sido una parte necesaria en la comunicación de las experiencias e ideas de las mujeres en una sociedad en la que sus voces y escritos fueron suprimidos"* [18].

c) 1970- 1980

En la década del 70 se asiste al crecimiento de la preocupación por la administración de la Literatura Gris. Se multiplicaron estudios sobre diversos aspectos como la indexación, catalogación, divulgación, recuperación de la información, etc. El objeto central de las preocupaciones fue la identificación y el acceso a los documentos de Literatura Gris. Aparecen entonces las primeras conferencias dedicadas a LG. Merece citarse por su relevancia el "Seminario de York", realizado en diciembre de 1978 [1], inicio de colaboración entre las bibliotecas europeas y los centros de documentación, precursor de la creación, más tarde, de la Base de Datos " SIGLE". En ese seminario el término "Literatura Gris" fue reconocido y aceptado oficialmente, pasando a ser usado por las principales bibliotecas y centros de documentación de Estados Unidos y Europa. [17]

Es en la década del 70, también, que comienzan a aparecer las bases de datos dedicadas a la Literatura Gris, las primeras en ser comercializadas. [17]

En 1970, la Publications Board de Estados Unidos se transformó en National Technical Information Service (NTIS), comenzando la publicación del Government Report Announcements, una continuación de Bibliography of Scientific and Technical Research.[17] El NTIS, subordinado a la Administración Tecnológica del Departamento de Comercio tuvo autonomía económica y se volvió el mayor y más importante organismo americano de Literatura Gris. NTIS es la fuente central de informaciones gubernamentales científicas, técnicas, de ingeniería y de negocios para centenas de agencias americanas. El permite el acceso a más de dos millones de publicaciones cubriendo más de 350 áreas de conocimientos. Su misión es apoyar el crecimiento económico de los Estados Unidos y la creación de empleos posibilitando el acceso a informaciones que estimulan la innovación y el descubrimiento. [21]

d) 1980- 1990

En los años 80 apareció la base de datos SIGLE (System for Information on Grey Literature in Europe), administrada por la EAGLE (European Association for Grey Literature Exploitation), un consorcio de importantes bibliotecas y centros de documentación de Europa. SIGLE es una base multi-disciplinaria, contiene informes, disertaciones y otros documentos de LG producidos en los países miembros. Abarca más de 674.000 registros y su acceso puede hacerse por CD, disco rígido o por Internet. Cubre documentos de 1980 hasta el presente y recibe alrededor de 55.000 registros anualmente. Las áreas de conocimiento cubiertas son: investigación y desarrollo, ciencia y tecnología, y economía. [24]

e) 1990 EN ADELANTE

La década del 90 asistió a la llegada de Internet, espectacular red mundial de comunicaciones. La red, aliada a una amplia comercialización de computadoras personales y a la divulgación de los editores de texto, ha traído para la Literatura Gris un crecimiento explosivo. Documentos electrónicos, como hemos señalado pasaron a formar parte de la LG y de las preocupaciones de los bibliotecarios. Fue, también, en esa década que comenzaron a realizarse bi-anualmente, a partir de 1993, las conferencias internacionales sobre Literatura Gris

Internet vino a atender la ansiedad de los científicos y de otros estudiosos por divulgar rápidamente sus conocimientos y tomar conocimiento de los estudios e investigaciones de otros Ella, a su vez, disminuyó mucho el problema de la dificultad de localización y acceso de los documentos. Como consecuencia de estas facilidades ofrecidas hubo un notable crecimiento en la diseminación del conocimiento y en la posibilidad de transferencia de tecnología mucho más rápidamente. Téngase en cuenta que Internet no es sólo una herramienta para divulgar y acceder a los documentos sino que es ella misma una gran productora de LG (la bibliografía de este trabajo incorpora algunos documentos de LG que son páginas de sitios de Internet). El Proyecto del Genoma Humano es uno de los más espectaculares ejemplos de colaboración humana con el uso de computadoras, Internet y LG. [8]

A fines del siglo pasado y a comienzos del actual se asistió a un nuevo fenómeno: la Literatura Gris proveniente de los ONGs de los países en desarrollo abordando los más diversos temas, tales como ambiente, justicia, feminismo, problemas indígenas, paz y política, entre otros. Esa Literatura Gris aparece con sus textos completos en Internet. El grupo Zapatista de México es uno de los más activos en la red, pero también otros grupos están apareciendo en su intento de llevar sus ideas al resto del mund.o [27]

6. SOBRE AMÉRICA LATINA Y EL CARIBE

No me ha sido posible obtener datos para trazar las etapas de evolución de la Literatura Gris en América Latina y el Caribe en el transcurso del tiempo. Sin embargo, por los pocos datos obtenidos, es posible inferir que ella acompaña también el desarrollo científico y tecnológico de la región, o con más precisión, de cada país ya que el desarrollo no es uniforme para todos los países en la región. Varias tentativas hubo para recogerla y diseminarla, tanto a nivel de entidades internacionales como de gobierno, universidades y empresas, existiendo una creciente conciencia de su importancia como factor de desarrollo económico y social.

Entre esas iniciativas, apenas como ejemplos, citaremos las siguientes:

a) BIREME (Centro Latino-Americano y del Caribe de Información en Ciencias de la Salud.),una iniciativa de OPAS (Organización Panamericana de la Salud). BIREME es un Centro Especializado de OPAS, establecido en Brasil desde 1967, en colaboración con el Ministerio de Salud, Ministerio de Educación, Secretaría de Salud del Estado de São Paulo y Universidad Federal de São Paulo. Tiene como misión contribuir al desarrollo de la salud en los países de América Latina y el Caribe, a través de la promoción del uso de información científico - técnica en salud.. Mantiene la base de datos LILACS (Literatura Latino-americana y del Caribe en Ciencias de la Salud), que registra y difunde la literatura en ciencias de la salud publicada y disponible en América Latina y en el Caribe. Posee más de 150.000 registros de artículos de periódicos en el área de la salud, además de tesis, libros, anales de congresos y conferencias, informes técnicos y científicos y publicaciones gubernamentales de los países de América Latina y el Caribe. Comprende informaciones desde 1982. Esta base de datos puede ser consultada a través de Internet en la página de BIREME .[5]

La base LILACS contiene las siguientes bases de datos:

DESASTRES (Centro Regional de Información sobre Desastres para América Latina y el Caribe) es una base de datos que contiene información bibliográfica sobre preparativos y atención de desastres en América Latina y el Caribe, incluye libros y literatura gris;

PAHO (Pan American Health Organization) contiene referencia bibliográficas y resúmenes de la biblioteca de OPAS, contiene materiales nuevos (convencionales o no), y muchos otros materiales de interés;

REPIDISCA (Red Panamericana de Información y Documentación en Ingeniería Sanitaria y Ciencias del Ambiente) contiene referencias bibliográficas de literatura de Ingeniería Sanitaria y Ciencias del Ambiente;

BBO (Odontología) es una base brasileña sobre odontología con documentos editados desde 1966, contiene tesis, libros, folletos, separatas y publicaciones periódicas;

LEYES (Legislación Básica en el Sector de Salud de América Latina y el Caribe) incluye referencias bibliográficas sobre legislación de salud vigente desde 1978;

AD SAUDE (Administración de Servicios de Salud) es una base experimental con bibliografía sobre el área de administración de servicios de salud, contiene documentos que abarcan aspectos políticos, económicos y sociales, incluyendo, también, documentos relacionados con la administración, organización, y planeamiento de los sistemas de salud;

ADOLEC (Salud en la Adolescencia) es una base piloto de referencias bibliográficas sobre adolescencia extraídas de LILACS y MEDLINE;

SIDORH (Sistema de Información y Documentación en Recursos Humanos en Salud) promueve y disemina bibliografía especializada en diferentes aspectos de recursos humanos y temas relacionados como participación social, planeamiento estratégico, descentralización de sistemas de salud, administración de servicios de salud;

MINCAP (Memoria Tecnica del INCAP) contiene referencias bibliográficas sobre el trabajo de nutrición de instituciones de América Central y Panamá INCAP, y

MEDCARIB (Literatura del Caribe en Ciencias de la Salud) contiene literatura relacionada con el Caribe de habla inglesa, referencias de libros, tesis, informes técnicos, anales de congresos, artículos de revistas desde el siglo XVIII hasta hoy. [16]

b) IBICT (Instituto Brasileño de Información en Ciencia y Tecnología). Fue creado en la década del 50 y depende del Consejo Nacional de Investigaciones y Desarrollo del Ministerio de Ciencia y Tecnología. Tiene como misión promover el desarrollo del sector de información proponiendo políticas, realizando investigaciones y difundiendo las innovaciones capaces de contribuir al avance de la ciencia y a la competitividad de la tecnología brasileña. El Instituto mantiene convenios nacionales e internacionales, como por ejemplo con el MERCOSUR. Coordina un proyecto de red nacional de información basado en Internet, denominado ANTARES. La red incorpora a Internet más de 200 instituciones brasileñas entre ellas Universidades, Sistema CNI (Confederación Nacional de la Industria), Sistema SEBRAE (Servicio de Apoyo a la Pequeña y Mediana Empresa), Asociaciones, Institutos de Investigación e Instituciones que prestan servicios de información. La red ANTARES cubre 22 estados e incorpora más de 200 instituciones que prestan servicios de información,. Su objetivo consiste en identificar, operar y ofrecer acceso a bases de datos (bibliográficas y de texto completo) en línea, vía Internet, que proporcionan información disponible en el campo de la ciencia y tecnología en los Estados de la Federación Brasileña. [10] El IBICT está implantando el proyecto de Biblioteca Digital Brasileña, un portal que deberá integrar los servicios de información sobre la producción científica y tecnológica del país.

c) INFOLAC. “El Programa Regional para el Fortalecimiento de la Cooperación entre Redes y Sistemas Nacionales de Información para el Desarrollo en América Latina y el Caribe (INFOLAC)” fue creado en 1986, por resolución de la XXIII Conferencia General de UNESCO. La Secretaría permanente de INFOLAC funciona en la División de Información e Informática de UNESCO para América Latina y el Caribe que tiene su sede en Caracas, Venezuela. Son países miembros: Argentina, Belize, Bolivia, Brasil, Colombia, Costa Rica, Cuba, Chile, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, México, Nicaragua, Paraguay, Perú, Santa Lucía, Trinidad y Tobago, Uruguay y Venezuela.

INFOLAC es un foro para el intercambio de conocimiento y experiencias en el área de servicios de información, abierto a todo tipo de instituciones públicas, privadas o profesionales, empeñadas en proveer servicios de información en la región. INFOLAC es un foro intergubernamental del cual pueden participar todos los países de América Latina y el Caribe, miembros de UNESCO, representados por sus respectivas autoridades nacionales de información. Su objetivo es mantener un foro para la discusión y desarrollo de ideas sobre políticas, tecnologías y servicios de información con miras a promover un desarrollo sustentable en América latina y el Caribe; funcionar como un organismo consultivo regional para los gobiernos; UNESCO y otras organizaciones regionales e internacionales en el área de servicios de información, integrar y desenvolver el sector de información en América Latina y en el Caribe, promover la cooperación regional e internacional más eficiente en el área de servicios de información en la Región. [12]

El Gobierno Brasileño representado por el IBICT, donó a UNESCO el software y la metodología de la red ANTARES y se ofreció para desempeñar un papel de liderazgo en el proceso de implantación en la región. De esta manera surgió la idea del proyecto que fue sometido a consideración del Comité de INFOLAC en una reunión ordinaria, realizada en setiembre de 1988, en Panamá, y en la Asamblea de INFOLAC, en marzo de 1999, en Colima, México, siendo aprobado por los representantes de los 24 estados miembros de UNESCO, integrantes de INFOLAC:[13]

Son objetivos del proyecto de la red ANTARES: incrementar en Internet la presencia de la cultura ibero-americana y caribeña; preservar y diseminar en Internet productos y servicios de información de las bibliotecas de los países de América Latina y del Caribe; establecer una base de cooperación técnica y metodológica entre los países de la Región para el registro y diseminación de información sobre páginas Web endógenas; promover y entrenar recursos humanos en las nuevas tecnologías de información utilizadas en el contexto de este proyecto de cooperación; establecer un sistema automatizado de búsquedas concurrentes de información sobre la totalidad de las páginas Web integrantes del sistema, independientemente, de su localización geográfica. [13]

d) INFOBILA. La base de datos "Información y Biblioteconomía LatinoAmericana" surgió en la biblioteca del Centro Universitario de Investigaciones Bibliotecológicas, CUIB, (UNAM), en 1985 a raíz de la necesidad de sus investigadores de tener a mano la literatura especializada en biblioteconomía, información y archivología producida en y sobre América Latina. Desde su inicio la biblioteca del CUIB se encargó de formar el fondo bibliográfico latino-americano con el fin de ofrecer acceso a la producción documental de la región y de esta manera conocer los problemas y soluciones adoptadas por cada país. El proyecto INFOBILA fue presentado durante el Segundo Coloquio sobre Automatización de Bibliotecas, realizado en la Ciudad de México en 1986. Su presentación formal en el medio profesional se hizo durante las XVII Jornadas Mexicanas de Biblioteconomía, realizadas ese mismo año en la ciudad de Puebla. El proyecto recibió financiamiento de diversas instituciones entre las que se cuentan: International Federation of Library Associations and Institutions (IFLA), a través de la Section for Latin America and the Caribbean (LAC) y de su Programme for Advancement of Librarianship (ALP), el Consejo Nacional de Ciencia y Tecnología (CONACyT) y la Organización de los Estados Americanos, OEA. . Es su objetivo: difundir la literatura de la especialidad, así como las experiencias, problemas y soluciones de los colegas de otros países de la región sobre temas de biblioteconomía, archivos, ciencia de información y otros relacionados, localizados en los acervos de las unidades de información de los países cooperantes de América Latina y el Caribe. Actualmente la base cuenta con 11.686 registros. INFOBILA ofrece información sobre biblioteconomía, de autores latino-americanos que publiquen en su país o en el extranjero, de autores extranjeros que publicaron sobre cualquier país de América Latina y del Caribe, o de autores de la región o extranjeros que hicieron traducciones, compilaciones, adaptaciones, colaboraciones sobre documentos de biblioteconomía relacionados con la región. [11]

Otras instituciones existen en otros países de América Latina y el Caribe, pero por razones de tiempo me limito a las mencionadas.

7. PROBLEMAS CON LA LITERATURA GRIS

Para que todo no parezca "un mar de rosas", es importante, antes de concluir registrar las dificultades que pueden encontrarse en el tratamiento de la Literatura Gris.

La LG es difícil de obtener, identificar y de acceder a ella y muchas veces, es desconocida incluso por las personas para las cuales su conocimiento sería muy importante [18] Además de ello exige mucho trabajo y una organización meticulosa.

En América Latina y el Caribe, principalmente en las empresas, pero también en otras instituciones, una de las mayores dificultades existentes es la "producción", pues nuestros técnicos no tienen el hábito de registrar sus conocimientos o descubrimientos. Muchas veces realizan descubrimientos importantes que ponen en práctica en sus respectivas instituciones, pero al no dejarlos registrados no pueden beneficiarse otros sectores de la propia institución o del propio país. Esto acarrea dos serios problemas para los bibliotecarios de empresas/industrias: convencer a los técnicos sobre la importancia de registrar sus descubrimientos y convencer a las empresas sobre la necesidad de desarrollar sistemas de preservación del "know how" interno.

8. CONCLUSIÓN

Desde la Antigüedad mujeres y hombres de los más diversos orígenes registraron en pergaminos, papeles u otros medios, sus descubrimientos, sus conocimientos, sus preocupaciones intelectuales, sus ansias y sus experiencias. Esos documentos muchas veces no lograron llegar al público a través de los canales normales o convencionales de divulgación. Mientras tanto ese formidable acervo contiene una parcela fundamental del conocimiento de la humanidad, y en virtud de los modernos medios de comunicación crece cada día de manera espectacular. Durante mucho tiempo, fue considerado por muchos un asunto secundario .

La Literatura Gris, como espero haber demostrado en este trabajo, está lejos de ser un tema de importancia secundaria, como acreditaban muchos y aún acreditan algunos. En verdad tiene una importancia capital en el proceso de desarrollo económico y social de un país o de una región y esa importancia está siendo reconocida cada vez más. En realidad ella es tanto o más importante que la comercialmente publicada y ambas se complementan.

La información es un recurso estratégico indispensable para el desarrollo económico y social de un pueblo. Ella se une a la tierra, a la mano de obra y al capital como un factor de producción.[6] La Literatura Gris es un medio para la diseminación de la información o conocimiento. Sirve de apoyo a los procesos de investigación, puede proporcionar información no hallada en las fuentes convencionales, contribuyendo al desarrollo social y económico de los pueblos y al de la Sociedad del Conocimiento.

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Evaluation of multimedia: why and how? An expedition in three voyages

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Abstract:

The pages that follow intend to narrate the 3 years of experience of the Banco del Libro's Committee of Evaluation of Digital Formats. It is the story of how this Venezuelan institution, after 40 years of experimentation with the printed word, has dared to make its move into the digital domain,. By means of the chronicle of three voyages, we describe in detail the criteria for multimedia evaluation that we have devised, some new reflections about reading and other findings from digital lands.

> *Plut ô t que de condamner les jeux de vidéo, les humanistes, les pedagogues, les créateurs, les auteurs devraient s'emparenter de cette nouvelle écriture et produire avec elle des œuvres dignes de ce nom, inventer les nouvelles formes de savoir et d'éxploration que lui correspondent, lui donner ses lettres de noblesse.*
> Pierre Levy[1]

The Banco del Libro is a Venezuelan institution whose foundations are laid on an apparently simple premise: *reading is pleasure*. But it also represents forty years of voyage which have never ceased to be fruitful, despite the ups and downs of trial and error. It has confided in an open and innovative exploration, instead of adopting univocal and infallible truths, since they would go against the very concept of reading for which it stands. For the institution - and particularly for the groups of study, evaluation and promotion of books for children and youths - reading is the hazardous act of interpreting and building sense from the individual. But to see such romantic idea followed up by promotion projects in our Latin American reality has been in fact what has nurtured us. For reading is a complex *inter-individual* practice (Petit, 1999) and at the same time a *social* one (Ferreiro, 1995).

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[1] "Instead of condemning video games, the humanists, the pedagogues, the authors, the creators, should become familiarized with this new sort of writing, produce with it works worthy of that name, invent its corresponding new forms of knowledge and exploration, and give it its title of nobility."

It is precisely in this innovative spirit that the project of Cd-Rom evaluation is conceived. Because we started off with the certainty that reading, not only in the written text or in the images of a picture book, but also in a conversation or in front of the screen of a computer, is an unstoppable process. Studying these new forms of reading, and selecting the best of the CD's which already accompany the boy from a tender age, are part of the work of the current evaluation group. And how do we know – especially today, in the middle of this revolution of concepts and ideas – what can be deemed as good or bad? We do not pretend to issue magic formulas, nor easily applicable prescriptions, but to form criteria; we do not pretend to impose our selection, but to provide guidance. Next I will try to narrate to you, by means of a chronicle, the voyage endeavored by the Banco del Libro: the departure, the evaluation criteria that have guided the course, along with some reflections on the itinerary and, finally, where has our voyage led us so far.

Planning the departure...

It was three years ago that the Committee of Evaluation of books for children and young put forward the idea of expanding its activities to the area of electronic publications. This idea arose from the fact that children's books and multimedia had many points in common.

First, an investigation of the multimedia market was carried out, and contacts were established with publishing houses that could be interested in collaborating with this young project. They responded promptly. And we decided to begin with the reviewing of stories in Cd-Rom, following the premise that the kind of reading to which the electronic book invited was closely linked to that of the recreational book.

We also found out that, during the eighties, along with the fruitful publication of educational software, numerous study and evaluation groups had arisen, conformed in their majority by teachers, parents and librarians. And it called our attention that they were in their majority study groups sharing the same views: multidisciplinary approach was not the rule.

We wondered then about the possibility of gathering specialists in different disciplines, and proceeded to do exactly that. Once the variegated crew was assembled, the journey was planned, and the day of meeting was fixed, we departed in our first exploratory voyage. But, as we advanced in the discussions, and carried out the process of nurturing the Banco del Libro's Center of Documentation with theoretical material and a collection of multimedia titles, the initial course of the project was modified. The first turn of the trip, and perhaps the most significant one, was marked by the realization that the thirty years of experience of the Committee of Evaluation of books and its criteria were not directly translatable to this domain. Evaluating books for children was not equivalent to evaluating electronic stories. Contradictorily, the lack of clarity of these beginnings caused the enrichment of the team. Because only deepening in the revision of many CD's, and thanks to a plural and multidisciplinary approach, we could finally comprehend the complexities of their nature. Those were days of rejecting prejudices, of tracing limits between the reading of a book and those experiences to which the digital world could be inviting us. The unavoidable fear to the threat of the new gradually vanished, while curiosity invited us to the revision of apparently "solid" traditional ideas. And we started to open up to words arising with the fast pace inherent to the reality they meant to designate: hypertext, interactivity, virtuality and globality, zapping, interface and rupture of linearity... The idea was – and it still is - to grant to this language of the new world a space for the caution and the depth; before it is drained in utopias and generalities.

Then we weighed anchors for the second time, but with a more open itinerary: the book and the CD-Rom invited to different communicational relationships. We understood that the wealth lies in the eco-systemic possibility (Calderon, 1999), in the "MacLuhanian" sense of "works-bridges" in continuous feedback, which expand the reader's communicational experience: a book leads to the movie, and from there to the multimedia and eventually to the web page, or vice versa (Banco del Libro, 2000a). One medium doesn't have to annul the experience offered by another, quite on the contrary, the formal execution of each work from its own language opens the interpretation possibilities and the aesthetic enjoyment. Between the years 1999 and 2000, we dared to carefully revise all the titles that fell in our hands, not discarding publications in other languages, because they contributed to give us a richer panorama of the medium's status. We were able to create new fields in the records and to systematize the entry of the CD's in the databases, establishing also an evaluation procedure which included report and review, in case it was recommended. Study lines and biannual timetables were devised to establish classifications and types of CD's, trying to understand the internal rules of these new genres. The restructuring of the Banco del Libro's web site was supported and oriented. And a group of CD's was rewarded in the Banco del Libro 2000's event "The Best Books for Children and Young", being eventually used in activities and projects of reading promotion with new media.

The crew had returned after its second voyage with some discoveries and achievements: a set of criteria that we continually validate until today, categories and classifications of the evaluated products, the design of records with new entry fields in the databases and the publication of reviews, essays, articles and reports narrating the experiences and different visions of this initial journey. Already at the end of last year (Banco del Libro, 2000b) approximately 45% of the CD's we revised were recommended for their quality, of which 20% were in other languages. 35% of the studied publications were discarded, and 20% were considered of improvable quality. In these cases, we have tried to establish contact with the publishers – especially Venezuelans and Latin Americans – in order to send them the report, and we have even managed to hold nutritious exchange interviews with them. Many other titles exceeded our area of study, but they were nevertheless revised. In the second stage, we went through a careful pre-selection, in order to be able to study the panorama better. For this reason, out of 3 revised titles, 2 were recommended. Today, we have enlarged the focus again, and we revise publications for children and young, not just educational, but of all type. Curiosity, open-mindedness and flexibility, instead of rigidity and dogma, have guided the course of the evaluations.

So far, the group of evaluation of digital formats continues sailing in its third voyage, with no return date. This crew, more adventurous and expert than in the beginning, continues its in-depth exploration of the new digital world. And it is today, after three years of experience, when we feel ready to share with you the outline of criteria that has guided us in the course (Banco del Libro, 2000a; Ladrón de Guevara, in press).

Criteria for evaluation of digital formats: a map to analyze the parts without losing sight of the whole.

The medium

To start the evaluation, it is important to get acquainted with the physical medium that contains the information (CD-Rom, DVD, web site, video game). In view of the changing nature of these media, it is convenient to analyze their advantages and disadvantages, in order to offer recommendations for their use and to compare them with the different platforms in which the same information is presented. The evaluation could eventually focus on the relationship between different products created under the same title, for instance: Cd-Rom Lego Creator and web site with activities (Banco del Libro, 2000a).

Authorship data:

In electronic publications, the different areas and disciplines that intervene in their creation should be taken into account. To the traditional authorship centered on the text and illustrations, now we should add the authorship of the design of navigation, interactivity and animation, digital videos, music, special effects and programming (Banco del Libro, 2000a). Thus, as in a movie, the spectator can recognize behind a well achieved scene the hidden stamp of one or several creators.

Our experience has led us to verify that quality is directly linked to the coherent and articulate work of a team of professionals of different disciplines. Perhaps this is how certain products manage to stand out of the snub marketing formulas that eventually collapse in the anonymity. Naïvely, we tend to believe that the multimedia has abolished the author. But the idea of authorship is perhaps being reconsidered. Would multimedia produce then the multiplicity of authors? Although the new relationships that could be arising in the author–reader symbiosis are currently part of our reflections, they represent an entire line of investigation to which we should grant a space apart. Let us get on the way again...

Technical data

They refer to the technical requirements necessary for the execution of the electronic publication. This information is usually in the packing of the product itself, but it does not necessarily guarantee a clear and specific recommendation. It is in this area that the evaluator has demonstrated to play a primordial role, because his or her reading should go beyond the seduction offered by the packing, and should also determine with more precision and detail the true technical demands, besides giving 'hints, tips and tricks' and other computer trifles that should be included in the review (Banco del Libro, 2000a).

Synopsis, general content and function

Here we intend to seize the product's intention through the synthesis of its contents: the argument or central thematic axis. After tracing a summary of what it seeks to communicate - of its script -, we should be able to proceed to examine with more thoroughness its chosen language and strategies. We intend to become aware of the subject and the genre (Ladrón de Guevara, 2000). For example, it is not the same thing to write or read poetry or narrative; the quality of an atlas is not judged as that of a novel, because they have different contents and internal rules. It helps, in principle, to use the enlightening - but sneaky - classification of publications in informative and recreational:

Informative

The publications classified as informative usually include the consultation and educational genres.

a. Among the publications of general consultation, there are the dictionaries and interactive encyclopedias; the popular virtual visits and the lists of references would also qualify.

b. The educational products are usually classified as tutorials, developers of capabilities and explorative.

Recreational

The recreational publications can be grouped in at least three types: related with literary genres, workshops and games.

a. Under the category of titles related with literary genres we usually have the electronic stories, living books, movie books and more classical works; derived from theater plays or poetry, for example.

b. The workshops, on the other hand, furnish the user with scenarios and tools meant to propitiate creation.

c. Finally, the games are applications especially designed to entertain, whose ludic end remains even when they have a plot based on, say, history. Here we usually include imaginative electronic versions of table games, "challenge chains" and strategy games.

Evaluation of interactive multimedia resources

In this level of analysis, it is specially important to determine how each resource works separately, and then to judge its relevancy, function, articulation and definitive result regarding the whole. Due to the popularity of these products, the stereotype becomes frequent. And with the novel sound, animation and interactivity tools, the market is saturated with fiascoes. They usually don't go beyond a supposedly attractive appearance, their content is innocuous, the resources are underemployed and the interactivity promise is not fulfilled. But these are products that end up being drained in themselves thanks to the wisdom of natural selection.

Typography, color, illustrations and pictures:

Here the graphic and diagramming aspects are reviewed, as well as the quality of digital resolution. Author's illustrations that enrich the plot, pictures of real facts supplementing a CD on history, could be subtle aesthetic choices helping to enhance the final quality of the publication and the persistence of the user's enjoyment.

Animation:

This area concentrates on analyzing the dynamic nature of the images: animation of icons, series or sequences, flying logos and anything that implies movement as a tool to strengthen the communicational strategy. It is a resource that can contribute to the definition of the characters in the stories. For example, highlighting a certain way of walking or the repetitive and peculiar movement of a character's hand can convey psychological depth and humor to the narrative structure. Again, it would be a matter of assessing the relevance of the elements introduced in the screen. Because gratuitous animations only overcrowd memory, and are usually limited to the amusing intention, without any relevance regarding the general structure.

Multimedia:

Here the incorporation of sound objects is analyzed: incidental music - environmental and/or descriptive -, voices and dialogues, off-screen narration, sound effects accompanying the interaction, digital sound videos. In this field, the quality of the music, its originality and references can positively influence the quality of the publication. However, the musical background of each screen or activity is usually neglected, often resorting to the same hollow and repetitive tune. There is a perceivable difference when sound, image and movement come together to expand the initial intention of the script, to supplement the possibilities of sense.

Interactivity:

Here it is convenient to go over the classical notions of activity and passivity (Ladrón de Guevara, in press). In principle, the interaction with a work refers back to the activity to which it invites. And it can be appreciated in a book, a painting or a sculpture. But the multimedia comes to offer, as in a movie, a third dimension. The program is supposed to determine the user's freedom of exploration, and to take into account complex variables such as the time and the ideal speaker's psychology. This goes without a doubt beyond the classical connotations of the author-reader relationship, and leads us to the author's implicit dialogue with his imaginary reader, or perhaps as well to a patent verification of the semiotic relationship of the text with its human target. Evaluating, for example, the experience to which an educational software invites us could be equivalent to evaluating the interaction between the schoolboy and the teacher (Buckleitner,1999).

In this sense, the selected mechanisms are reviewed to unveil the information and the navigation strategies outlined in the publication, in order to assess how they are employed to expand the experience. Analyzing the hypertext can be fundamental, for example, for the evaluation of an encyclopedia, because the universe of knowledge would be enriched with the user's possibility of interlacing connections and elaborating, in the individual exploration, his own corpus of sense. The interactivity levels can define the open or closed character of the publication. Then the possibility arises of analyzing the interactivity levels as well, some centered on the exploration, and others, for instance, on the user's creative will. It is true that the interactivity offer can be seen as a continuum, a long line: in one end, the closed universe planned by the programmer, in the other one, the "freedom" each explorer is able to reach. (Banco del Libro, 2000a; Ladrón de Guevara, in press).

Communicational experience

In this port, we integrate again the fragments of analysis. We assemble the parts in order to perceive the whole. We started out with the intention expressed by the publishing team, and now we recapitulate to see the final result in the 'how'. Art critics usually remind us that the most important thing is the how, not the what, because in our time the same subjects have been discussed over and over again. The innovation is in the treatment given to the execution and its ulterior effect. Here the author-reader - or the multimedia set-explorer - dialogue is reestablished. It is finally in the reception, in the interpretation where, more or less, you can measure the quality.

This section has to do with the final conclusion and summarizes the general impression of the evaluator (or group of them): how is the function of an electronic publication related to the formal aspects? Which strategies allow themselves to be seen? Has it been possible to transmit what we suppose was intended? (Banco del Libro, 2000a).

It is necessary to consider the possible balance between the intention of the publication and the media selected to achieve it. Here it can be accurately mentioned how the electronic publication expands the literary experience with the incorporation of animation, music and interactivity options. We can also study the nature of this experience and wonder about more extra-textual aspects: to what codes it appeals, how much complicity it requests to the user, how much novelty it proposes and, very especially, how it dialogues with the books, the cinema, the oral narration or the storyteller, or how it can supplement other school or family activities.

The turn...

It is in fact with the communicational and aesthetic experience, with the turn to the reader, to the subjectivity, that we close the evaluation. Our starting point was the individual experience with the work, then we examined the parts in objectivity trials, we figured out sense in the analysis, and we returned to ourselves to elucidate what the encounter left us. After having displayed our map of criteria, let us wisely remember that the individual experience is absolutely essential. It is, for example, in the reviews of books and recommended CD's where we intend to be most transparent about the process that we go through: each evaluator writes down his or her experience and view of the work. These lines allow to see the subtle agreement between shared criteria and individual tastes. Couldn't this be a definition of reading? Is perhaps evaluation another name for profound and analytical reading? Is it not the invitation to make a critical selection a way of promoting reading in its own right?

The evaluation program invites to probe beyond appearance, trying to figure out senses in the intimate dialogue between the reader and the work. The support of the institution consists of propitiating a space of continuous formation for each evaluator, for each reader, putting him or her in contact with a diversity of styles and manifestations, creators, critics and publishers. This year, for instance, we have been able to systematize even more the concept of formation, because, parallel to the weekly evaluation of the two committees, we have programmed seminars, workshops and conversations with authors and publishers, while each evaluator keeps weaving his or her reflections in articles and reviews for both Banco del Libro's and external publications.

We finish with an invitation to come closer to us, and to participate in *Caleidoscopio*, the Banco del Libro's digital magazine, in http://www.bancodellibro.org.ve. There we intend to offer - from the core of the semantic wealth of the word 'reading' - a space for the exchange, the debate and the formation. Forty years of experience and study have revealed to us that it is an absurdity to speak of reading if we banish individuality. For reading is in the man.

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¿Cómo y para qué evaluar multimedia? Una expedición en tres viajes.

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Resumen:

Las páginas que siguen buscan narrar la experiencia de 3 años del Comité de Evaluación de Formatos Digitales del Banco del Libro. Es el relato de cómo, entre hallazgos y confirmaciones, esta institución venezolana, con 40 años de experimentación sobre lo impreso, se ha atrevido a iniciarse en lo digital. A manera de crónica en tres viajes, describimos detalladamente los criterios de evaluación de multimedia que hemos creado, nuevas reflexiones en torno a la lectura y algunos otros hallazgos traídos de tierras digitales.

> *Plut ô t que de condamner les jeux de vidéo, les humanistes, les pedagogues, les créateurs, les auteurs devraient s'emparenter de cette nouvelle écriture et produire avec elle des œuvres dignes de cenom, inventer les nouvelles formes de savoir et d'éxploration que lui correspondent, lui donner ses lettres de noblesse.*
>
> Pierre Levy

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[1] Ponencia a presentar en el 67th IFLA Council and General Conference. Boston, EEUU. Del 16 al 25 de Agosto de 2001.

El Banco del Libro es una institución venezolana que ha venido a sentar sus bases sobre una premisa en apariencia simple: *leer es placer*. Pero se trata de cuarenta años de travesía que no han dejado de brindar frutos desde el espacio mismo del ensayo y el error. Ha confiado en la exploración abierta e innovadora, procurando no erigirse sobre verdades unívocas e infalibles, pues iría en contra del concepto mismo de lectura que maneja. Leer es para la institución, y ha sido, en especial, para los grupos de estudio, evaluación y promoción de libros para niños y jóvenes, el movedizo acto de interpretar y construir sentido desde el individuo. Pero concretar idea tan romántica con proyectos de promoción en nuestra realidad latinoamericana ha sido precisamente lo que nos ha nutrido y sigue devolviendo vitalidad. Leer es una compleja práctica *interindividual* (Petit, 1999) a la vez que *social* (Ferreiro, 1995).

Es precisamente desde ese espíritu innovador de donde surge el proyecto de evaluación de Cd-Rom's. Pues partimos de la certeza de que siempre se está leyendo, no sólo frente al texto escrito o al recorrer las imágenes de un libro álbum, sino también en una conversación o frente a la pantalla de una computadora. Estudiar esas nuevas formas de leer y seleccionar esos buenos CD's que ya comienzan a acompañar al niño desde pequeño son parte de la labor del actual grupo de evaluación. Y ¿cómo saber – en especial hoy en esta revolución de conceptos e ideas – qué puede ser bueno o malo? No se trata de extender fórmulas mágicas ni recetas fácilmente aplicables, sino de formar criterios; no se trata de imponer nuestra selección, sino de orientar. A continuación intentaré narrarles, a manera de crónica, el viaje en el que se em*barcó* el Banco del Libro, la partida, los criterios de evaluación que han orientado el curso junto con algunas reflexiones del trayecto y, finalmente, por donde anda la travesía a estas alturas.

Tramando la partida...

Fue hace tres años cuando surgió del Comité de Evaluación de libros para niños y jóvenes, la idea de extender sus actividades a las publicaciones electrónicas. Se partió del hecho de que los libros para niños y el multimedia tenían puntos en común.

Primero, se realizó una investigación del mercado multimedia, y se establecieron contactos con editoriales que pudieran estar interesadas en colaborar con este joven proyecto. No tardaron en respondernos. Y decidimos comenzar con la revisión de cuentos en Cd-Rom, pues partimos de la premisa de que la lectura a la que invitaba el libro electrónico estaba muy vinculada a la del libro recreativo.

También descubrimos que habían surgido en los años ochenta, paralelo a la prolífica publicación de software educativo, numerosos grupos de estudio y evaluación conformados en su mayoría por docentes, padres y bibliotecarios. Y nos llamó la atención que fueran en su mayoría grupos de estudio que compartían el mismo discurso: lo multidisciplinario no era la regla.

Nos preguntamos entonces por la posibilidad de reunir especialistas de distintas disciplinas, y así hicimos. Una vez conformada tan variopinta tripulación, trazado el recorrido, y fijado el día de reunión, iniciamos nuestro primer viaje exploratorio. Pero, a medida que se avanzaba en las discusiones, y se iba nutriendo el Centro de Documentación del Banco del Libro con material teórico de apoyo y una colección de títulos multimedia, se iba modificando el curso inicial del proyecto. El primer giro del viaje, y quizás el más significativo, lo marcó el descubrimiento de que los treinta años de experiencia del Comité de Evaluación de libros con sus criterios no eran directamente trasladables. Evaluar libros para niños no equivalía a evaluar cuentos electrónicos. Contradictoriamente, la falta de claridad del inicio fue enriquecedora para el equipo. Pues sólo profundizando en la revisión de muchos CD's, y gracias al discurso plural y multidisciplinario, llegamos a reconocer las complejidades de su naturaleza. Fueron días despojándonos de prejuicios, tejiendo límites entre la lectura de un libro y aquellas experiencias a las que podían estar invitando lo digital. El inevitable temor a lo nuevo como amenaza fue desvaneciéndose, mientras la curiosidad iba invitando a la revisión de las "sólidas" ideas tradicionales. Y empezamos a abrirnos a palabras que surgían al mismo ritmo de la realidad que querían designar: hipertexto, interactividad, virtualidad y globalidad, zapping, interface y ruptura de la linealidad... La idea era – y sigue siendo - conceder aquí, a esa lengua del nuevo mundo, un espacio para la cautela y la profundidad; antes de que se agote en utopías y generalidades.

Entonces zarpamos, por segunda vez, pero con un trayecto más abierto: el libro y el CD-Rom invitan a relaciones comunicativas distintas. Entendimos que la riqueza está en la posibilidad ecosistémica (Calderon, 1999), en el sentido "macluhaniano", de obras puentes que se retroalimentan ampliando así la experiencia comunicativa del lector: un libro lleva a la película y de allí al multimedia para seguir hasta la página web, o viceversa (Banco del Libro, 2000a). Un soporte no tiene porque anular la experiencia a la que invita el otro, muy por el contrario, la ejecución formal de cada obra desde su propio lenguaje abre las posibilidades de interpretación y el disfrute estético. Entre los años 1999 y 2000, nos atrevimos a revisar cuidadosamente todos los títulos que nos iban llegando, no descartamos las publicaciones en otros idiomas, pues contribuían a darnos un panorama más rico del status del soporte. Logramos crear fichas con nuevos campos y sistematizar el ingreso de los CD's en las bases de datos, también establecimos un procedimiento de evaluación que incluyera informe y reseña, en caso de que fuera recomendado. Se trazaron líneas de estudio y cronogramas semestrales para establecer clasificaciones y tipos de CD's, tratando de comprender las reglas internas de estos nuevos géneros. Se respaldó y orientó la reestructuración del sitio web del Banco del Libro. Y se premió un conjunto de CD's para el Evento Los Mejores Libros para Niños y Jóvenes del Banco del Libro 2000, que además fueron aprovechados para actividades y proyectos de promoción de lectura con nuevos medios.

La tripulación volvía entonces del segundo viaje con grandes descubrimientos y logros: un conjunto de criterios, que seguimos validando hasta hoy, categorías y clasificaciones de los productos evaluados, el diseño de fichas con nuevos campos para el ingreso en las bases de datos y la publicación de reseñas, ensayos, artículos y ponencias que narraban las experiencias y distintas visiones de este recorrido inicial. Ya a finales del año pasado (Banco del Libro, 2000b) se contaba con un aproximado de 45% de CD's recomendados por su calidad, más un 20% de títulos estudiados en otros idiomas, y del 35% de publicaciones descartadas, 25% eran de calidad regular, pero, en esos casos, se ha tratado de establecer contacto con las editoriales – en especial venezolanas y latinoamericanas – para el envío del informe, e incluso hemos llegado a tener nutritivas entrevistas de intercambio; y un resto de títulos revisados excedían nuestra área de estudio, pero no dejaron de ser revisados. Así es como de cada 3 títulos revisados, 2 fueron recomendados. Y es que en esta segunda etapa, acudimos a una cuidadosa preselección para poder estudiar mejor el panorama. Hoy, hemos vuelto a ampliar el foco, revisamos publicaciones para niños y jóvenes, no solo educativas, sino de todo tipo. Curiosidad, apertura y flexibilidad, no la rigidez ni el dogma, han guiado el curso de las evaluaciones.

Hasta el momento, el grupo de evaluación de formatos digitales sigue embarcado en su tercer viaje y no tiene fecha de regreso. Esta tripulación, más aventurera y experta que al inicio, sigue explorando y profundizando en el nuevo mundo digital. Y es hoy, después de tres años de experiencia, cuando nos sentimos listos para compartir con ustedes el esquema de criterios que nos ha orientado en el curso (Banco del Libro, 2000a; Ladrón de Guevara, en prensa).

Criterios de evaluación de formatos digitales, un mapa para analizar sus partes sin perder el todo.

El soporte

Para iniciar la evaluación, es importante conocer el medio físico que contiene la información (CD-Rom, DVD, sitio web, video juego). Frente a la cambiante naturaleza de estos medios conviene analizar sus ventajas y desventajas, ofrecer recomendaciones para el uso y comparar con los diferentes soportes en los cuales se presenta la misma información. La evaluación podría llegar a orientarse en revisar la relación entre diferentes productos creados bajo un mismo título, como por ej.: Cd-Rom Lego Creator y sitio web con actividades (Banco del Libro, 2000a).

Datos de autoría:

En las publicaciones electrónicas se debe tomar en cuenta las diferentes áreas y disciplinas que intervienen en su creación. A la tradicional autoría en torno al texto e ilustraciones, ahora se suma la autoría del diseño de navegación, interactividad y animación, videos digitales, musicalización, efectos especiales y programación (Banco del Libro, 2000a). Y, como con una película, el espectador puede reconocer que detrás de una escena bien lograda se esconde el sello de uno o varios creadores.

Nuestra experiencia nos ha llevado a constatar que la calidad está directamente vinculada al trabajo coherente y articulado de un equipo de profesionales de distintas disciplinas. Quizás sea así como consiguen destacarse de las fórmulas chatas de mercadeo que se hunden en el anonimato. Con ingenuidad tendemos a creer que el multimedia ha abolido al autor. Pero quizás se esté replanteando la idea de autoría; ¿lo multimediático apelaría entonces a la multiplicidad de autores? Aunque, las nuevas relaciones que puedan estar surgiendo en la simbiosis autor – lector son actualmente parte de nuestras reflexiones, se trata de toda una línea de investigación a la que debemos concederle su espacio aparte. Reanudemos pues el recorrido...

Datos técnicos

Alude a los requerimientos técnicos necesarios para la ejecución de la publicación electrónica. Esta información suele encontrarse en el empaque del propio producto, pero no necesariamente supone una recomendación clara y precisa. Es justo aquí donde el evaluador ha demostrado tener un papel primordial, pues su lectura debe ir más allá de la seductora oferta del empaque, e incluso complementar con más precisión y detalle las verdaderas exigencias técnicas, además de dar *hints, tips and tricks* y otras menudencias informáticas e incluirlas en la reseña (Banco del Libro, 2000a).

Sinopsis, contenido general y función

Aquí se busca asir la intención en la síntesis de los contenidos del producto: el argumento o eje temático central. Al trazar un resumen de lo que se pretende comunicar, del guión, podremos proceder a examinar con más detenimiento el lenguaje y estrategias elegidas. Se trata de tomar conciencia del tema y el género (Ladrón de Guevara, 2000). Por ejemplo, no es lo mismo escribir o leer poesía que narrativa; no se juzga la calidad de un atlas como la de una novela, pues tienen contenidos y reglas internas distintos. Ayuda, en principio, partir de la orientadora, pero movediza, clasificación de publicaciones informativas y recreativas:

Informativos

Las publicaciones de corte informativo suelen agrupar a su vez, los géneros de consulta y educativos.

a. Entre las publicaciones de consulta general, se encuentran los diccionarios y enciclopedias interactivas, las populares visitas virtuales, y también entrarían las listas de referencias.

b. Los productos educativos suelen clasificarse en tutoriales, de desarrollo de destrezas y de exploración.

Recreativos

Las publicaciones recreativas pueden intentar agruparse en, al menos, tres tipos: relacionadas con géneros literarios, talleres y juegos.

a. Bajo la categoría de títulos relacionados con géneros literarios suelen estar los cuentos electrónicos, *living books*, *movie books* y obras más clásicas, derivadas del teatro o la poesía, por ejemplo.

b. Los talleres, por su parte, ponen a disposición del usuario escenarios y herramientas que propicien la creación.

c. Finalmente, están los juegos que son aplicaciones diseñadas especialmente para entretener, que, aún cuando la trama gire en torno a la historia, su fin sigue siendo lúdico.

Aquí suelen contemplarse imaginativas versiones electrónicas de los juegos de mesa, cadenas de retos y juegos de estrategia.

Evalulación de recursos multimedia interactivos

En este nivel de análisis resulta especialmente importante revisar cómo funciona por separado cada recurso para luego pasar a ver en el todo la pertinencia, su función, articulación y resultado definitivo. Debido a la popularidad de estos productos, el estereotipo se hace frecuente. Y con la novedosas herramientas de sonido, animación e interactividad, el mercado se satura de fiascos. No suelen ir más allá de una supuesta apariencia atractiva, son de contenido inocuo, los recursos son subutilizados y la promesa de interactividad no se cumple. Pero son productos que acaban por agotarse en sí mismos. Sabia selección natural.

Tipografía, color, ilustraciones y fotografías:

Aquí se revisan los aspectos gráficos y de diagramación, al igual que la calidad de su resolución digital. Ilustraciones de autor que enriquezcan la trama, fotografías de hechos reales que complementen un Cd de historia, serían sutiles elecciones estéticas que acaban por definir la calidad final de la publicación y lo inagotable del goce.

Animación:

Este aparte se centraría en analizar la naturaleza dinámica de las imágenes. Animación de iconos, series de secuencias, *flying logos* y todo lo que supone el movimiento como herramienta para fortalecer la estrategia comunicativa. Es un recurso que puede contribuir a que los personajes estén bien caracterizados. Por ejemplo, marcar una determinada forma de caminar o el movimiento repetitivo y peculiar de una mano en un personaje pueden otorgar profundidad psicológica y humor a la estructura narrativa. De nuevo, se trataría de revisar la relevancia de los elementos que se introducen en pantalla. Pues las animaciones gratuitas sólo ocupan memoria y se agotan en la intención graciosa sin que tengan ninguna relevancia para la estructura general.

Multimedia:

Aquí se analiza la incorporación de objetos sonoros: música incidental, ambiental y/o descriptiva, voces y diálogos, narraciones en off, efectos de sonido que acompañan la interacción, videos digitales sonoros. En este caso, la calidad de la música, su originalidad y sus referencias pueden influir positivamente en la publicación. Sin embargo, suele descuidarse el fondo musical de cada pantalla o actividad con una misma tonada hueca y repetitiva. Y se siente la diferencia cuando sonido, imagen y movimiento se unen para ampliar la intención inicial del guión, para complementar las posibilidades de sentido.

Interactividad:

Aquí es conveniente revisar las clásicas nociones de actividad y pasividad (Ladrón de Guevara, en prensa). En principio, la interacción remite a la actividad a la que invita una obra. Y puede estar contemplada en un libro, un cuadro o en una escultura. Pero el multimedia viene a ofrecer, distinto al libro, una tercera dimensión. Se supone que la programación debe determinar la libertad de exploración del usuario, y tomar en cuenta complejas variables como el tiempo y la psicología del interlocutor ideal. Esto sin duda va más allá de la intención clásicamente manejada en la relación autor-lector, al diálogo implícito del autor con su interlocutor imaginario, o ¿acaso sea la constatación patente de la relación semiótica del texto con su destinatario? Acaso evaluar, por ejemplo, la experiencia a la que invita un software educativo podría ser como evaluar la interacción planteada entre el niño y el maestro (Buckleitner,1999).

En este sentido, se repasan los mecanismos elegidos para desencadenar la información y las estrategias de navegación planteadas en la publicación, y cómo son aprovechados para ampliar la experiencia. Analizar, por ejemplo, el hipertexto puede ser fundamental a la hora de evaluar una enciclopedia, pues el universo de conocimientos se enriquecería con la posibilidad de que el usuario teja conexiones, y elabore, en la exploración individual, su propio cuerpo de sentido. Los niveles de interactividad pueden definir el carácter abierto o cerrado de la publicación. Entonces surge la posibilidad de analizar también los niveles de interactividad, unos centrados en la exploración, y otros, por ejemplo, en la voluntad creativa del usuario. Lo cierto es que la oferta de interactividad puede verse como un continuum, una larga línea: a un extremo, el universo cerradamente planificado por un programador, al otro, "la libertad" a medida del explorador (Banco del Libro, 2000a; Ladrón de Guevara, en prensa).

Experiencia comunicativa

En este puerto volvemos a integrar los fragmentos de análisis. Ensamblamos las partes para percibir el todo. Partimos de la intención que se trazó el equipo editor, y ahora recapitulamos para ver el resultado final en el cómo. Los críticos de arte suelen recordarnos que lo importante es lel cómo no el qué, pues ya en nuestra época se han tocado los mismos temas una y otra vez. Lo innovador es el trato que se le ha dado a la ejecución y si llega. Aquí se restablece el diálogo autor-lector, o equipo multimedia-explorador. Finalmente es en la recepción, en la interpretación donde, más o menos, se puede medir la calidad.

Este aparte tiene que ver con la conclusión final y resume la impresión general del evaluador (o grupo de ellos): ¿cómo la función de una publicación electrónica se une con los aspectos formales? ¿cuáles son las estrategias que dejan entreverse? ¿se ha logrado trasmitir lo que suponemos que se buscaba? (Banco del Libro, 2000a).

Se trata de sopesar el posible equilibrio entre la intención de la publicación y los medios seleccionados para lograrla. Aquí puede mencionarse con precisión cómo la publicación electrónica expande la experiencia literaria al incorporar animaciones, música y opciones de interactividad. Aquí, podemos además, revisar cuál es la naturaleza de dicha experiencia y preguntarnos por aspectos más extratextuales: a qué códigos apela, cuánta complicidad pide al usuario, cuánta novedad propone y, muy en especial, cómo dialoga con los libros, el cine, la narración oral o el cuentacuentos, o como puede complementar otras actividades escolares o familiares.

La vuelta...

Es así precisamente, con la experiencia comunicativa y estética, con la vuelta al lector, a la subjetividad, como cerramos la evaluación. Partimos de la experiencia individual con la obra, luego examinamos las partes en ensayos de objetividad, desentrañamos sentido en el análisis, y volvemos a nosotros mismos para dilucidar lo que el encuentro nos dejó. Después de haberles tendido nuestro mapa de criterios, recordemos prudentemente que lo esencial es la experiencia individual. Es, por ejemplo, en las reseñas de libros y CD's recomendados donde buscamos hacer transparente el proceso que seguimos: cada evaluador redacta su experiencia y parecer de la obra. Son líneas que dejan ver el sutil acuerdo entre criterios compartidos y gustos individuales. ¿No podríamos definir así la lectura? ¿Acaso la evaluación sea otra forma de nombrar la lectura profunda y analítica? ¿Invitar a la selección crítica no es en sí promover la lectura?

El programa de evaluación invita a profundizar más allá de lo aparente, a desentrañar sentidos en ese diálogo íntimo entre el lector y la obra. El apoyo de la institución está en propiciar un espacio de formación continua para cada evaluador, para cada lector al ponerlo en contacto con diversidad de estilos y manifestaciones, creadores, críticos y editoriales. Este año, por ejemplo, hemos conseguido sistematizar aún más la idea de formación, pues, paralelo a la evaluación semanal de los dos comités, se han programado seminarios, talleres, charlas con autores y editores, mientras que cada evaluador va tejiendo sus reflexiones en artículos y reseñas para publicaciones internas y externas al Banco del Libro.

Sólo nos queda invitarlos a acercarse a nosotros, y a participar en Caleidoscopio, la revista digital del Banco del Libro, en http://www.bancodellibro.org.ve . Allí buscamos ofrecer - desde la misma riqueza semántica de la palabra lectura - un espacio para el intercambio, el debate y la formación. Cuarenta años de experiencia y estudio, nos han revelado que es un contrasentido hablar de lectura desterrando lo individual. Y es que leer es el hombre.

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Centro de Conocimiento sobre/de grupos Étnicos Indígenas Centroamericanos

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Resumen:

Analiza la situación bibliotecológica de los grupos étnicos indígenas centroamericanos. Para ello, incluye los datos más relevantes tomados del diagnóstico situacional realizado sobre esa temática. Con base en los datos obtenidos elabora una propuesta que contribuya a dar a conocer, el ser indígena centroamericano. La propuesta abarca: misión, objetivos, servicios, resultados esperados y evaluación. Da siete recomendaciones finales para fortalecer la información sobre los grupos étnicos indígenas centroamericanos.

I. INTRODUCCIÓN

La investigación **Estudio de Factibilidad del Rescate Documental sobre/de Grupos Étnicos Centroamericanos** analizó la realidad bibliotecológica de la región en esta temática y determinó que existen ausencias muy marcadas, en relación con la administración de información autóctona. Los datos que arrojó el diagnóstico situacional de esta problemática, mostró la carencia de fuentes documentales que atestigüen estudios historiográficos de la memoria bibliográfica centroamericana sobre/de grupos étnicos indígenas.

El indígena centroamericano, poblador originario de la región, es un ser humano sencillo, tímido y desconfiado de su forma de ser; producto quizá, del atropello de las clases de poder, desde la época del descubrimiento (1502); la conquista, que les impuso la encomienda (cobro de tributos), la esclavitud indígena y el decrecimiento de la población indígena. Posterior a la conquista, se da la colonización de los pobladores y con ello, la explotación de la mano de obra indígena (Fonseca, 1998).

Estereotipos, prejuicios y fenómenos de discriminación hacia los indígenas son recurrentes a lo largo de la historia. En Costa Rica, por ejemplo, en 1522 la población indígena era de 27200 habitantes y constituía el cien por ciento de la población costarricense. Para 1801, la población del país era de 52291 habitantes, de los cuales 8291 eran indígenas; o sea, 15.7%. En la actualidad, el porcentaje de población indígena es menor al 5%. "El término indígena [para definir ese 5%] aquí incluye todo los mestizos (negros-indios, blancos-indios, extranjeros-indios, ...)" (Tenorio A., 2000, p. 20). Como se puede observar las consecuencias demográficas de la conquista fueron trágicas.

Para que exista una verdadera estructura de reinvindicación de estos pueblos, debe iniciarse dando a conocer sus identidades ancestrales, que prevalecen en algunos pueblos casi intactas, porque han sido fortalecidas en forma aguerrida al interior de sus comunidades. "Por identidad vamos a entender un (ser ser humano). No el ser en sí, sino la situación del ser precisada en el tiempo y en el espacio" (Rojas Mix, 1996, p. 43)

Para facilitar el arraigo de las identidades, la educación, a través de su vehículo, la información, se convierte en el puente perfecto. La información sobre estos grupos sociales facilita el acercamiento a su cosmovisión y contribuye a desdibujar los espacios de opresión y de ignorancia, que sobre ellos aún perduran. Sin embargo, no es sólo manteniendo documentos en las unidades de información documental como se logra el cambio, es dinamizando los servicios que en ella se ofrecen, es actuando como agente facilitador de procesos, es integrando redes de sistemas de información documental que contribuyan a hacer realidad la sociedad informada, propiciando un espacio alternativo en la región centroamericana. Para ello, el especialista de la información debe ser parte activa al interior del proceso y también de su entorno.

Por lo tanto, ahora más que nunca, es necesaria la inversión en acceso y disponibilidad de información, pero no como un producto de datos fríos, sino con valor agregado que posibilite un desarrollo sostenible a nivel global. Se debe tener claro que la información es un recurso competitivo que le da la ventaja al que la posee. Por eso, es necesario recopilar la información documental sobre/de los grupos étnicos indígenas centroamericanos, pero igualmente, es importante formar a estos grupos étnicos para que hagan uso de la información.

II. DESCRIPCIÓN GENERAL DE LA METODOLOGÍA Y RESULTADOS DEL DIAGNÓSTICO.

El Proyecto **Estudio de Factibilidad del Rescate Documental sobre/de grupos étnicos centroamericanos** se formuló con el propósito de conocer la posibilidad de identificar y recopilar la información necesaria, para tener acceso y disponibilidad, en forma moderna y/o virtual a los documentos existentes sobre/de grupos étnicos indígenas centroamericanos. No se trata de generar un nuevo producto de consumo, sino de desarrollar estrategias que hagan esa información indispensable, para la toma de decisiones cotidianas, de quienes forman parte de esos grupos sociales y de quienes están vinculados de una u otra manera con ellos.

Un requisito indispensable para realizar el estudio fue identificar las instituciones que estudian los grupos étnicos en cada país de la región centroamericana. Con los datos obtenidos, se concluyó que lo más recomendable era establecer contacto con las instituciones que acopian el material documental de cada país. Se encontró que existen muchas instituciones que estudian diferentes grupos étnicos en los países de

América Central, especialmente, los indígenas. Sin embargo, instituciones homólogas, con las cuales se puedan establecer convenios y ofrecer transferencia de información similares, únicamente, las Bibliotecas Nacionales. Las Bibliotecas Nacionales son las instituciones que resguardan por ley el patrimonio nacional, por lo tanto, ellas son el contacto directo, para acercarse a los datos bibliográficos de cada país. También, son instituciones suficientemente poderosas y consolidadas, como para establecer convenios con otras bibliotecas con misiones similares.

Para la recolección de datos se elaboró un instrumento. Para ello, se revisó una gran cantidad de fuentes documentales que pudieron haber realizado estudios sobre grupos étnicos a nivel centroamericano y latinoamericano, con el fin de encontrar algunos instrumentos que se ajustaran a este estudio. No fue posible hallar, en el área de Bibliotecología, algún instrumento que tuviera algo relacionado con esta temática. Se procedió entonces, a elaborar un instrumento para la recolección de datos. El instrumento se piloteó a un pequeño grupo de los encuestados. Una vez hechos todos los ajustes se aplicó en las bibliotecas nacionales centroamericanas. El cuestionario abarcó preguntas cerradas para aquellos aspectos que requirieran datos precisos y abiertas para situaciones más cualitativas. El cuestionario fue contestado por los directores de las bibliotecas nacionales de la región centroamericana.

Los datos que se recolectaron mediante la aplicación del cuestionario y sobre la observación directa, se sistematizaron en forma descriptiva, por medio de cuadros y gráficos. Un comentario se dio sobre los datos que muestran cada cuadro, resaltando los aspectos más relevantes para esta investigación.

El análisis de la información se agrupó en grandes rubros:

1. **Desarrollo de colecciones sobre grupos étnicos indígenas centroamericanos.**

Abarcó procedimientos y normas; tamaño de la colección por soporte documental; políticas y procedimientos nacionales de conservación y preservación; políticas y procedimientos institucionales (Biblioteca Nacional) de conservación y preservación; presupuesto para la adquisición de colecciones sobre/de grupos étnicos indígenas centroamericanos; recursos disponibles para la administración de la colección y digitalización de información sobre/de grupos étnicos indígenas centroamericanos.

Los datos obtenidos son desalentadores hay una ausencia casi general de información al respecto. Tampoco hay garantía de contar con colecciones exhaustivas sobre la temática. Todo lo contrario, hay ausencias muy notorias acerca de este tipo de información. Sólo dos países cuentan con políticas y procedimientos para conservar y preservar los documentos. Sin embargo, sus "laboratorios" son muy rudimentarios y obsoletos. Ningún país indica que cuenta con presupuesto para la adquisición de estos materiales. Sobre la posibilidad de digitalizar esta información, los encuestados responden positivamente, siempre y cuando se dote con equipo y personal para ello.

El cuadro no.1 muestra de manera esquemática el Desarrollo de Colecciones sobre/de grupos étnicos indígenas de América Central en las Bibliotecas Nacionales.

CUADRO NO. 1
DESARROLLO DE COLECCIONES SOBRE/DE GRUPOS ÉTNICOS INDÍGENAS DE AMÉRICA CENTRAL EN LAS BIBLIOTECAS NACIONALES*, POR PAÍS: PROCEDIMIENTOS Y NORMAS
1998

Norma/ País Procedimiento	Belice	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panamá
Identificar	-Depósito Legal -Búsquedas bibliográficas -Convenios con las casas distribuidoras	No responde	-Contactan instituciones especializadas a nivel continental y mundial -Direcciones de Asuntos Indígenas -Museos -Instituto Indígenista Interamericano	-Contactos personales -Catálogos de publicaciones -Bibliografías Información en la prensa.	No responde	-Ley del ISBN -Ley de ISSN -Ley de Depósito Legal -Ley de Imprenta -Ley de Derechos de Autor -Ley de Archivo Nacional	-Estricto seguimiento con editores, libreros y autores -Agencia ISBN -Depósito Legal
Seleccionar	Seleccionan automáticamente todo lo productivo en el país	No responde	No responde	Tienen como política adquirir todo documento que se publique sobre Honduras	No responde	Todo documento de publicación nacional ingresa a la Biblioteca Nacional y se conserva como patrimonio nacional	Todos los documentos por ser parte de la Bibliografía Nacional
Aquirir	Donación Compra**	No responde	Donación	De acuerdo con los procedimientos de la Universidad	No responde	Mediante legislación pertinente	-Depósito Legal -Intercambio -Canje -Compra -Donacion
Procesar	Todos los documentos	Lo que reciben	No responde	AACR2 Dewey 20 Tesauros UNBIS-UNESCO	Dewey	RCAA Dewey LEM Cutter Tesauros Diccionarios	RCAA Dewey MARC (Base de datos) Horizonte

Datos suministrados por los directores de las Bibliotecas.

*En Honduras debe entenderse Sistema Bibliotecario de la Universidad Nacional Autónoma de Honduras.

** Si es necesario.

2. Consumidores de información

Se consideró la categoría de usuarios que asisten a la biblioteca a consultar información en general y sobre la temática en cuestión y, los usuarios que hacen uso de servicios informacionales de manera electrónica.

Algunas de las respuestas carecen de información, ya que en las bibliotecas no cuentan con estadísticas al respecto.

Ejemplo

CUADRO NO. 2
ADQUISICIÓN CENTRALIZADA DE MATERIAL DOCUMENTAL SOBRE/DE GRUPOS ÉTNICOS INDÍGENAS DE AMÉRICA CENTRAL, POR PAÍS
1998

País Institución	Belice	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panamá
Organismos Centralizados	**Biblioteca** Nacional Archivo Nacional	**No hay**	**Biblioteca especializada** de la Dirección Nacional de Patrimonio Cultural, CON CULTURA	**Biblioteca** Central de la Universidad Nacional Autónoma de Honduras	**Centro de Información y Documentación** sobre la Costa Atlántica	**Biblioteca** Nacional	**Biblioteca** Nacional. No existe una centralización de la adquisición sobre este material en el país.
Organismos coadyuvantes	No indica	No indica	No indica	No indica	No indica	-Archivo Nacional -Museo Nacional -Comisión Nacional de Asuntos Indígenas -Laboratorio de Etnología de la Universidad de Costa Rica.	No indica

Datos suministrados por los directores de las bibliotecas.

3. Organismos involucrados a nivel mundial.

Se buscaron datos sobre organismos especializados en grupos étnicos; Organismos que adquieran material documental sobre la temática estudiada en forma centralizada a nivel nacional; convenios entre unidades de información documental homólogos y se exploró la posibilidad de crear un "Organismo Rector a nivel Centroamericano".

La mayoría de los encuestados consideró una buena opción la conformación de un "Organismo Rector a nivel Centroamericano" porque podría lograr recursos financieros, creación de políticas y estrategias nacionales e internacionales para desarrollar colecciones exhaustivas y servicios dinámicos.

CUADRO NO. 3
ORGANISMO RECTOR SOBRE GRUPOS ÉTNICOS INDÍGENAS DE AMÉRICA CENTRAL, POR PAÍS
1998

País Grado de apoyo	Belice	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panamá
Centralizado	X	X		X		X	
Otra opción			Mejor coordinar con el Instituto Indigenista Interamericano (México)		No responde		**Descentralizada con una base de datos central, tipo AGRIS.**

Datos suministrados por los directores de las Bibliotecas.

4. Servicios especializados

Se recabó información sobre medios de acceso a la información; disponibilidad de los documentos y nuevos servicios proyectados.

Se observó que un 71.43% de los encuestados carecen de bibliografía nacional, producto básico de las bibliotecas nacionales.

CUADRO NO. 4
MEDIOS DE ACCESO A LAS EXISTENCIAS DE LOS DOCUMENTOS SOBRE/DE GRUPOS ÉTNICOS INDÍGENAS DE AMÉRICA CENTRAL EN LAS BIBLIOTECAS NACIONALES, POR PAÍS
1998

País Diseminación	Belice	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panamá
Catálogos automatizados		X		X		X	X
Catálogos manuales		X		X	X	X	
Catálogos impresos							
Colecciones abiertas	X						
Otros			Entrevistas personales	Bibliografías especializadas	Bibliografía Nacional	Archivo documental	-Bibliografía Nacional -Boletín de nuevas adquisiciones -Internet

Datos suministrados por los directores de las Bibliotecas.

5. Elementos de apoyo

a. Recursos Humanos

Se determinó que el personal que labora en las bibliotecas nacionales es escaso; son muy pocos los que cuentan con educación formal en el campo bibliográfico.

b. Material Tecnológico

Se constató que todas las bibliotecas nacionales tienen posibilidades de acceso a internet.

Producto de los datos obtenidos se elaboraron una serie de conclusiones y recomendaciones para que sean consideradas en cada país.

III. CENTRO DE CONOCIMIENTO VIRTUAL SOBRE GRUPOS ÉTNICOS INDÍGENAS CENTROAMERICANOS: PROPUESTA

1. Justificación

La transformación de la región centroamericana podría gestarse desde los sistemas de información documental, apoyados en los procesos digitales emergentes. Los ambientes digitalizados establecen vínculos estrechos entre las computadoras y los seres humanos, fomentando el intercambio de ideas y otro tipo de relaciones culturales y económicas.

Los grupos étnicos indígenas centroamericanos forman parte de ese proceso social, económico y cultural y éste depende enormemente del desarrollo tecnológico y de la habilidad para adaptarse al cambio.

3. Propuesta

Con base en los datos obtenidos del diagnóstico; de la carencia de al menos una biblioteca especializada sobre/de grupos étnicos indígenas en la región centroamericana, del aporte que las tecnologías informacionales pueden brindar al desarrollo integral del ser humano y su convivencia con sus conciudadanos, se plantea la creación de un **Centro de Conocimiento sobre/de Grupos Etnicos Indígenas Centroamericanos –GEIC-** que sirva de ente rector y vele por la planificación y seguimiento de la ejecución de procesos tendientes a desarrollar y fortalecer ésta temática.

El propósito del Centro es dinamizar actividades tales como:

- Acceso y disponibilidad de información sobre/de GEIC
- Fortalecimiento de la identidad cultural de esos grupos, al disponer de información sobre su pasado y su presente, de manera que facilite el desarrollo de una visión futura de su cultura.
- Acceso a la participación ciudadana al contar con un recurso centralizado que facilite el acceso y disponibilidad de la alfabetización y análisis crítico de su entorno.
- Facilidad para resolver problemas en forma colectiva.
- Permita la obtención de información en diferentes formatos, tales como texto, vídeo, audio, gráfico sobre los GEIC.
- Promoción del desarrollo de proyectos colectivos en el contexto de los GEIC.
- Creación y asesoramiento de Bibliotecas especializadas para las comunidades indígenas de América Central.

3. Misión

La misión del Centro de Conocimiento sobre/de Grupos Étnicos Indígenas Centroamericanos tiene como propósito:
Contribuir con el libre acceso y disponibilidad de información sobre/de GEIC.
Promover el rescate y control documental sobre/de GEIC.
Fomentar y apoyar la alfabetización y análisis crítico de la realidad nacional e internacional a los GEIC.

4. Objetivos

- Implementar una red a nivel centroamericano de unidades de información documental que apoyen el rescate, acceso y disponibilidad de la información documental sobre/de GEIC.
- Organizar un "clearinghouse" de información documental sobre/de GEIC, que facilite la digitalización y generación de megadocumentos en diferentes formatos y soportes, de la producción cultural e intelectual de estos grupos, para ponerlos a disposición de la humanidad.
- Crear un "portal (website)" sobre GEIC que enlace a todos los organismos y permite que cuenten con ese tipo de información, facilitando espacios de reflexión y análisis sobre la cultura, costumbre y condiciones de vida de los grupos étnicos indígenas centroamericanos, con la participación de investigadores, especialistas y los integrantes de esos grupos.
- Impulsar la creación de bibliotecas especializadas dirigidas a los GEIC que contribuyan a la alfabetización, análisis e interpretación de su cultura y el entorno, fortaleciendo su identidad, propiciando la igualdad de oportunidades y potenciándolos como grupos en la región y en el mundo.

5. Servicios

1. Acceso y disponibilidad de información actualizada y exhaustiva en el momento que se requiera.
2. Bases de datos con información sobre/de GEIC.
3. Red de información a nivel regional.
4. Enlaces con fuentes personales de información: consultores, técnicos, investigaciones, especialistas ejecutivos, docentes, etc., a través del megamedio de infocomunicación internet.
5. Acceso a multimedios sobre costumbres, tradiciones, mitos, manuscritos y documentos en general sobre GEIC.
6. Educación "in situ" y a distancia dirigida a minorías étnicas y lingüísticas, analfabetas y marginales.
7. Bibliotecas especializadas en las comunidades indígenas.
8. Foros de discusión locales y electrónicos donde puedan interactuar los GEIC y cualquier ciudadano del mundo.
9. Programas de alfabetización, análisis y reflexión del país y el entorno.
10. Personal especializado que imparta planes de alfabetización, análisis e interpretación de la realidad nacional y mundial, dirigidos para los GEIC.
11. Préstamos interbibliotecarios nacionales e internacionales.
12. CD-ROM(s) de información digital sobre/ de GEIC.
13. Talleres de capacitación.

6. Resultados esperados

-Un Centro de conocimiento sobre/de GIEC que integre cuatro programas: una red sobre/de GEIC; un portal (Website) que haga un minado sobre esta temática; el control bibliográfico de la temática en cuestión y bibliotecas en comunidades indígenas.

Cada programa incluye resultado, indicadores de progreso, metodología, estrategia y alcance.

Los resultados esperados se desarrollan de acuerdo con el esquema siguiente:

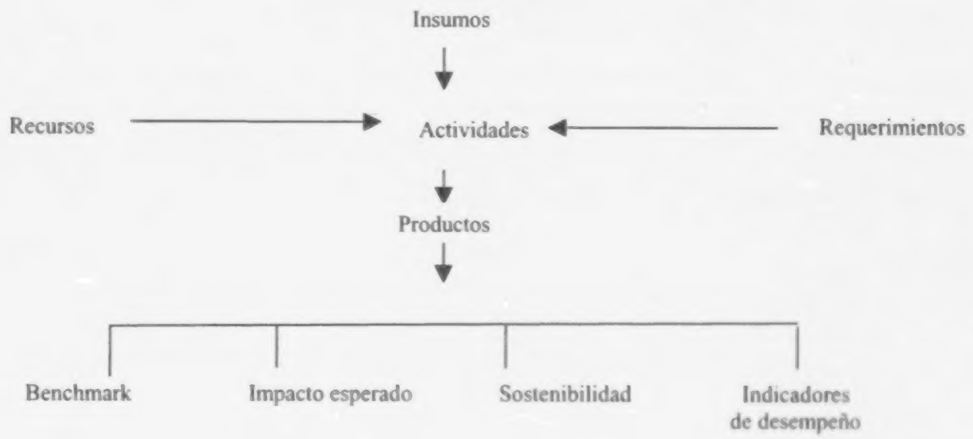
Insumos
Recursos
Actividades
Requerimientos
Productos
Benchmark
Impacto esperado
Sostenibilidad
Indicadores de desempeño

Diagrama 1-1

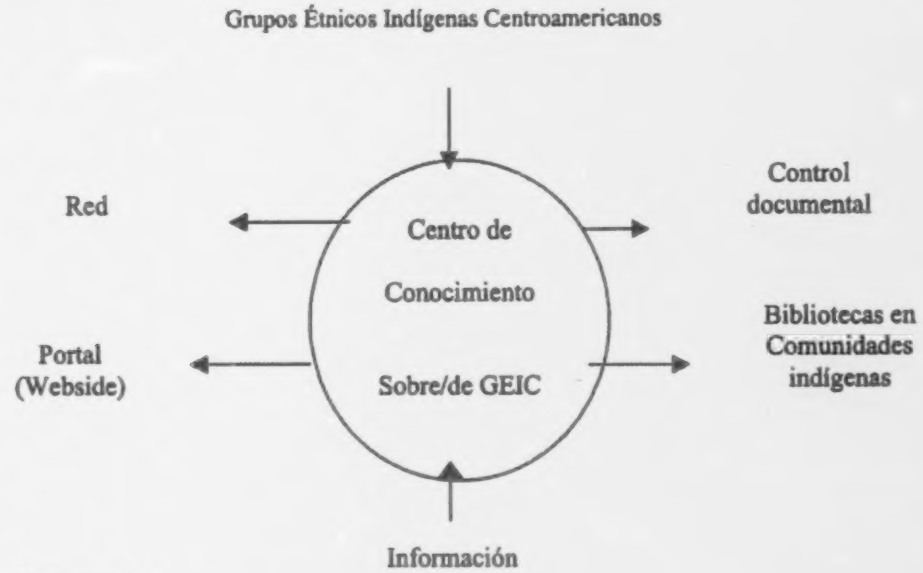
Grupos Étnicos Indígenas Centroamericanos
Red
Control documental
Centro de Conocimiento Sobre/de GEIC
Portal (Webside)
Bibliotecas en Comunidades indígenas
Información

Diagrama 1-2

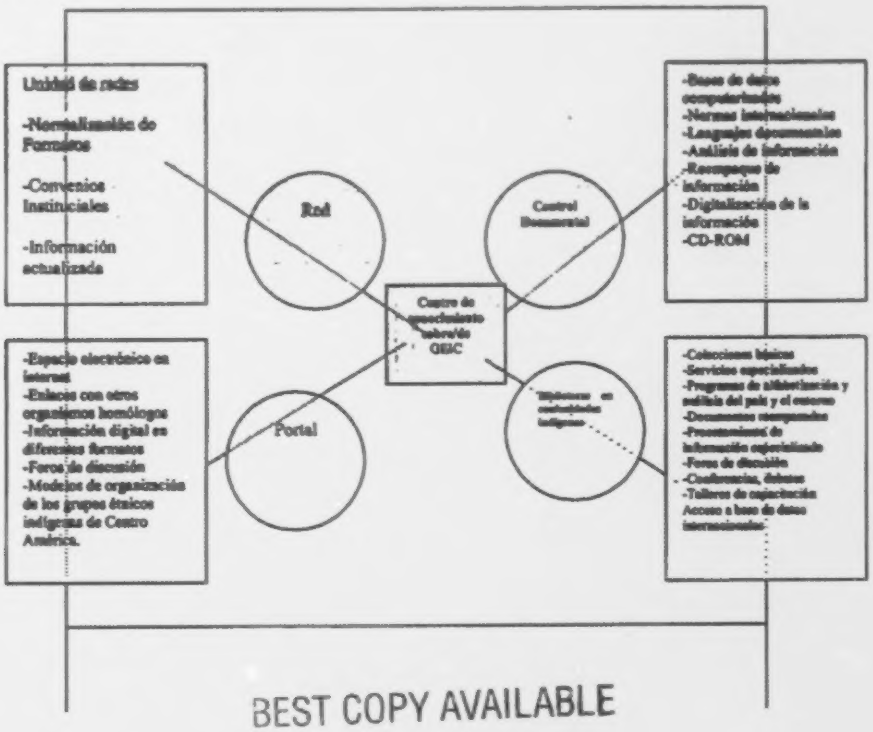
Unidad de redes
-Normalización de Formatos
-Convenios Institucionales
-Información actualizada
-Bases de datos computarizadas
-Normas internacionales
-Lenguajes documentales
-Análisis de información
-Reempaque de información
-Digitalización de la información
-CD-ROM
Red
Control Documental
Centro de conocimiento sobre/de GEIC
-Espacio electrónico en internet
-Enlaces con otros organismos homólogos
-Información digital en diferentes formatos
-Foros de discusión
-Modelos de organización de los grupos étnicos indígenas de Centro América.
Portal
Bibliotecas en comunidades indígenas
-Colecciones básicas
-Servicios especializados
-Programas de alfabetización y análisis del país y el entorno
-Documentos [illegible]
-Procesamiento de información especializada
-Foros de discusión
-Conferencias, debates
-Talleres de capacitación
Acceso a base de datos internacionales

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Diagrama 2-1

Resultado 1

Red de información sobre/de grupos étnicos indígenas centroamericanos que de a conocer el aporte de esas culturas y facilite el intercambio de diferentes concepciones de mundo

Indicadores de progreso

1.Análisis documental de la información sobre/de GEIC.
2.Aplicación de normas internacionales para la descripción de los documentos sobre/de GEIC.
3.Lenguajes documentales especializados sobre esta temática que faciliten la descripción de contenidos intelectuales y la recuperación de los documentos.
4.Bases de datos computarizadas con información sobre/de GEIC, operables por medio de software amigable y elaborados con la participación de los actores principales (los indígenas) y en consulta con los bibliotecólogos e informáticos.
5."Clearinghouse" de información sobre/de GEIC que garantice el acceso y disponibilidad de la memoria intelectual y cultural sobre/de GEIC (documentos "in situ")
6.Digitalización de la memoria intelectual y cultural sobre/de GEIC.
7.Fuentes secundarias de información tales como: indices, reempacamiento, comentarios, etc.
8.CD-ROM(s) con información sobre/de GEIC en diferentes formatos.

Indicadores de Progreso

1. Unidad de redes que reunifiquen y den mantenimiento a los equipos computacionales y softwares.
2. Diseño de formatos y protocolos de intercambio de información.
3. Convenios entre instituciones que faciliten el flujo de la información.
4. Sostenibilidad institucional de cada nodo de la red.
5. Flujo de información actualizada y permanente sobre/de GEIC al menos en la región.

Resultado 2

Control documental sobre/de GEIC que fortalezcan los acervos culturales de la región.

Diagrama 2-2

Resultado 3

"Portal (Website)" sobre GEIC en el megamedio de mayor difusión mundial permitiendo a esos grupos contar con un espacio en la aldea global.

Indicadores de progreso

1. Colecciones básicas sobre/de GEIC.
2. Colecciones con información general que les permita alfabetizarse e ilustrarse en cualquier campo del conocimiento.
3. Servicios de información a la comunidad.
4. Programas de alfabetización, debates y foros de discusión comunitarios.
5. Programas de rescate de la tradición oral especialmente en los grupos que aún conservan la lengua autóctona.
6. Personal capacitado en alfabetización y promoción de la lectura y en la gestión y gerencia de bibliotecas para GEIC.

Indicadores de Progreso

1. Dirección electrónica del "portal (website)"
2. Información digital sobre/de GEIC
3. Enlaces con otras direcciones electrónicas homólogas.
4. Información en diferentes formatos sobre/de documentos en movimiento, con sonido y/o video a través de internet
5. Foros de discusión, análisis y debates sobre las culturas, costumbres y condiciones de vida de los GEIC
6. Modelos de organización de los GEIC
7. Correo electrónicos, noticias electrónicas

Resultado 4

Bibliotecas especializadas sobre GEIC en comunidades indígenas.

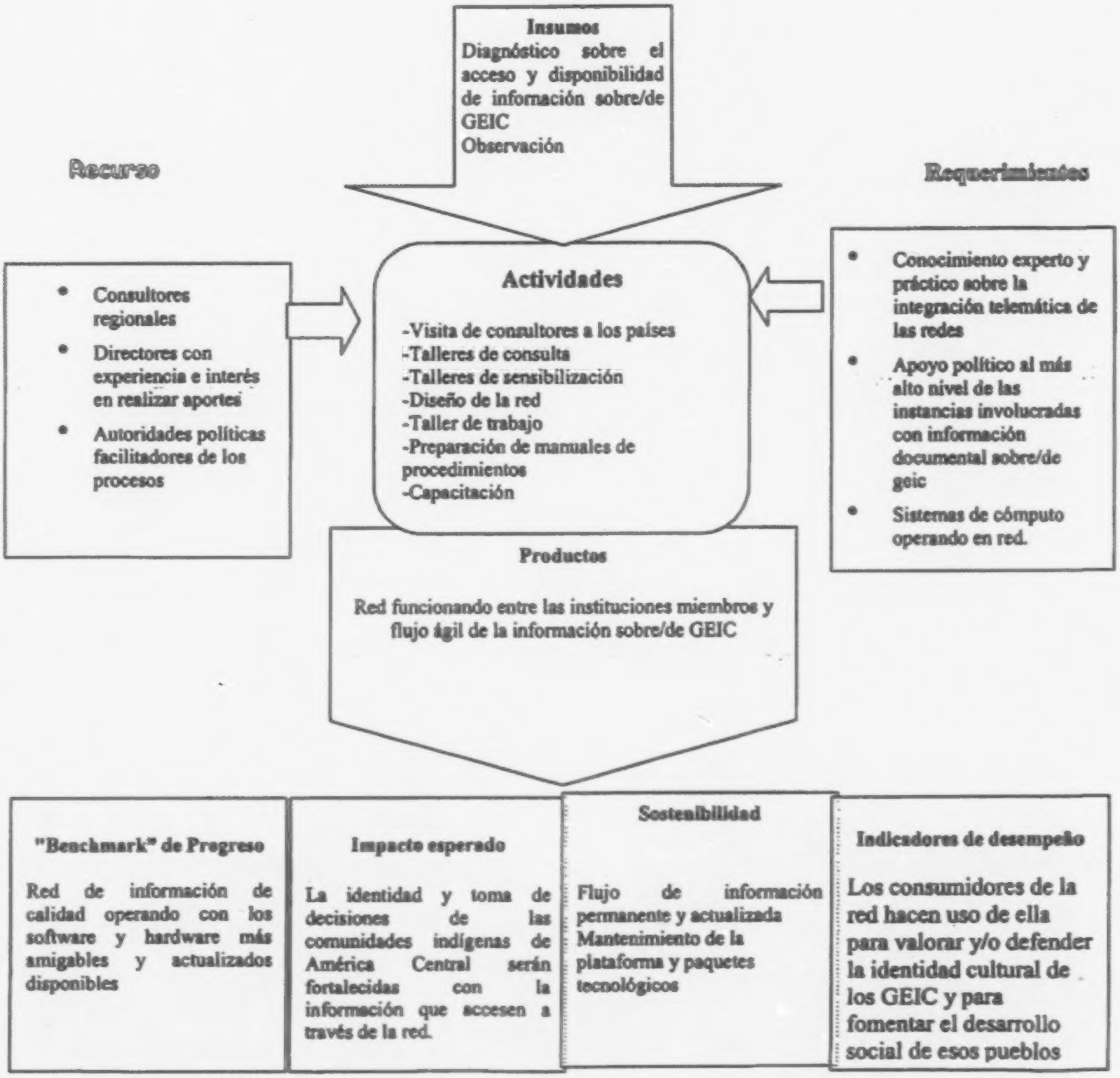
Diagrama 3

RESULTADOS

	1	2	3	4
Alcance	Regional (América Central)	Regional (América Central Internacional) (Instituciones o individuos que publiquen sobre/de GEIC)	(Aldea global)	(Comunidades de indígenas de la región de América Central)
Estrategia	Involucramiento de las bibliotecas nacionales, centros de documentación especializados Archivos nacionales y UID en general	Leyes relacionadas con derecho de autor, depósito legal, ISBN, etc. Involucramiento de funcionarios de las instancias técnicas y especializadas.	Utilización de Internet como plataforma telemática.	Creación de Bibliotecas indígenas Alfabetización de la comunidad indígena.
Metodología	-Firma de convenios en unidades de información. -Normalización de formatos de intercambio de información. -Acceso a internet de todas las UID.	-Entrevista a los actores -Evaluación de software y hardware -Aplicación de normas internacionales -Generación de metadatos	-Diseño de un estético y práctico portal que incluya derechos de los pueblos indígenas -Desarrollo de diferentes productos de salida: -Foro de discusión -Listas de interés -Correos electrónicos -Sitios de noticias	-Entrevista con autoridades gubernamentales y directores de bibliotecas públicas -Reuniones con la comunidad involucrada -Proyectos con organismos y gobiernos internacionales que tengan programas de colaboración con los indígenas.

Diagrama 4-1

Resultado esperado 1: Red de información sobre GEIC



Insumos
Diagnóstico sobre el acceso y disponibilidad de información sobre/de GEIC
Observación

Recurso

- Consultores regionales
- Directores con experiencia e interés en realizar aportes
- Autoridades políticas facilitadores de los procesos

Actividades

-Visita de consultores a los países
-Talleres de consulta
-Talleres de sensibilización
-Diseño de la red
-Taller de trabajo
-Preparación de manuales de procedimientos
-Capacitación

Requerimientos

- Conocimiento experto y práctico sobre la integración telemática de las redes
- Apoyo político al más alto nivel de las instancias involucradas con información documental sobre/de geic
- Sistemas de cómputo operando en red.

Productos

Red funcionando entre las instituciones miembros y flujo ágil de la información sobre/de GEIC

"Benchmark" de Progreso

Red de información de calidad operando con los software y hardware más amigables y actualizados disponibles

Impacto esperado

La identidad y toma de decisiones de las comunidades indígenas de América Central serán fortalecidas con la información que accesen a través de la red.

Sostenibilidad

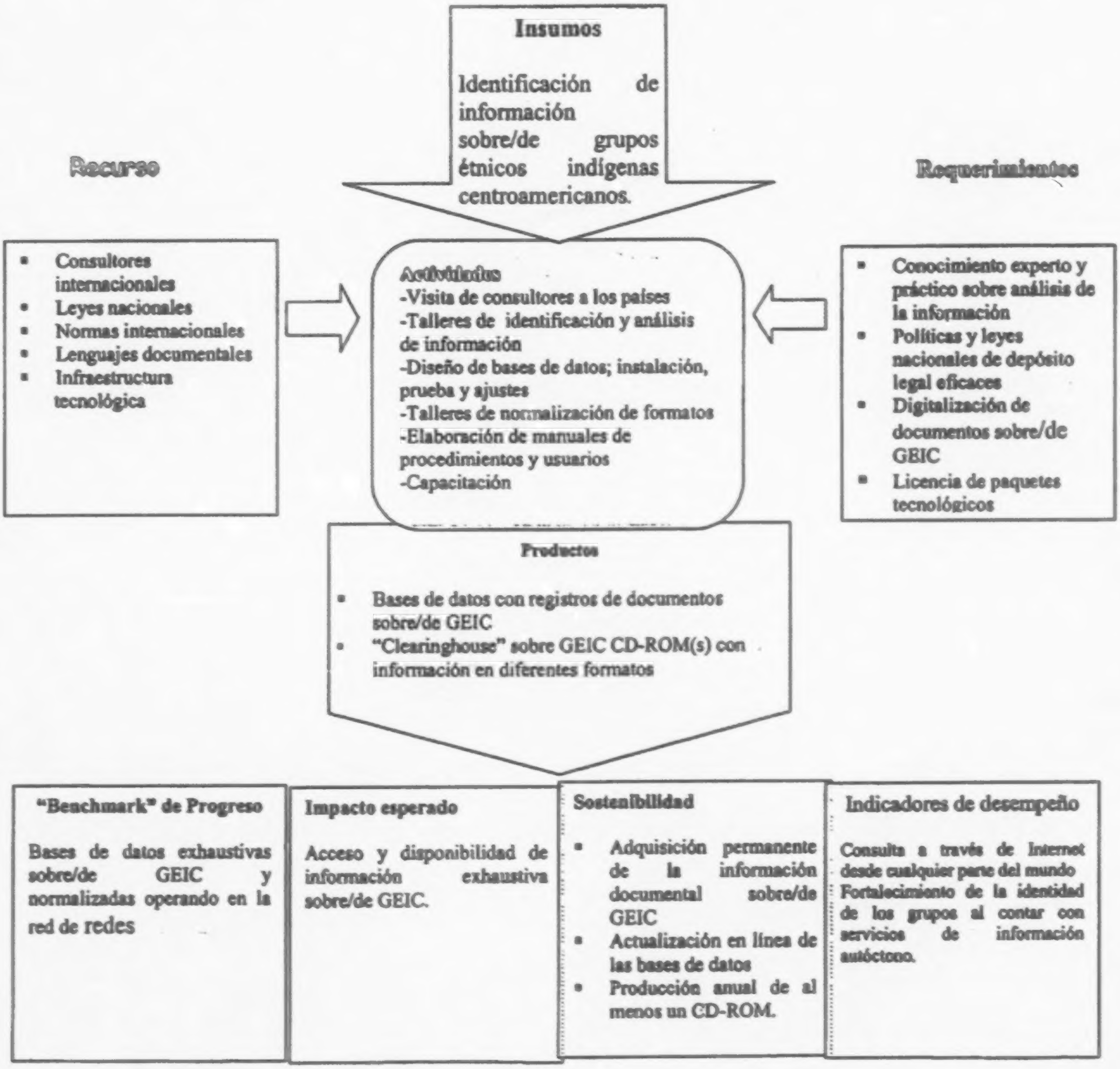
Flujo de información permanente y actualizada
Mantenimiento de la plataforma y paquetes tecnológicos

Indicadores de desempeño

Los consumidores de la red hacen uso de ella para valorar y/o defender la identidad cultural de los GEIC y para fomentar el desarrollo social de esos pueblos

Diagrama 4-2

Resultado esperado 2: Control documental sobre/de GEIC



Insumos

Identificación de información sobre/de grupos étnicos indígenas centroamericanos.

Recurso

- Consultores internacionales
- Leyes nacionales
- Normas internacionales
- Lenguajes documentales
- Infraestructura tecnológica

Actividades

-Visita de consultores a los países
-Talleres de identificación y análisis de información
-Diseño de bases de datos; instalación, prueba y ajustes
-Talleres de normalización de formatos
-Elaboración de manuales de procedimientos y usuarios
-Capacitación

Requerimientos

- Conocimiento experto y práctico sobre análisis de la información
- Políticas y leyes nacionales de depósito legal eficaces
- Digitalización de documentos sobre/de GEIC
- Licencia de paquetes tecnológicos

Productos

- Bases de datos con registros de documentos sobre/de GEIC
- "Clearinghouse" sobre GEIC CD-ROM(s) con información en diferentes formatos

"Benchmark" de Progreso

Bases de datos exhaustivas sobre/de GEIC y normalizadas operando en la red de redes

Impacto esperado

Acceso y disponibilidad de información exhaustiva sobre/de GEIC.

Sostenibilidad

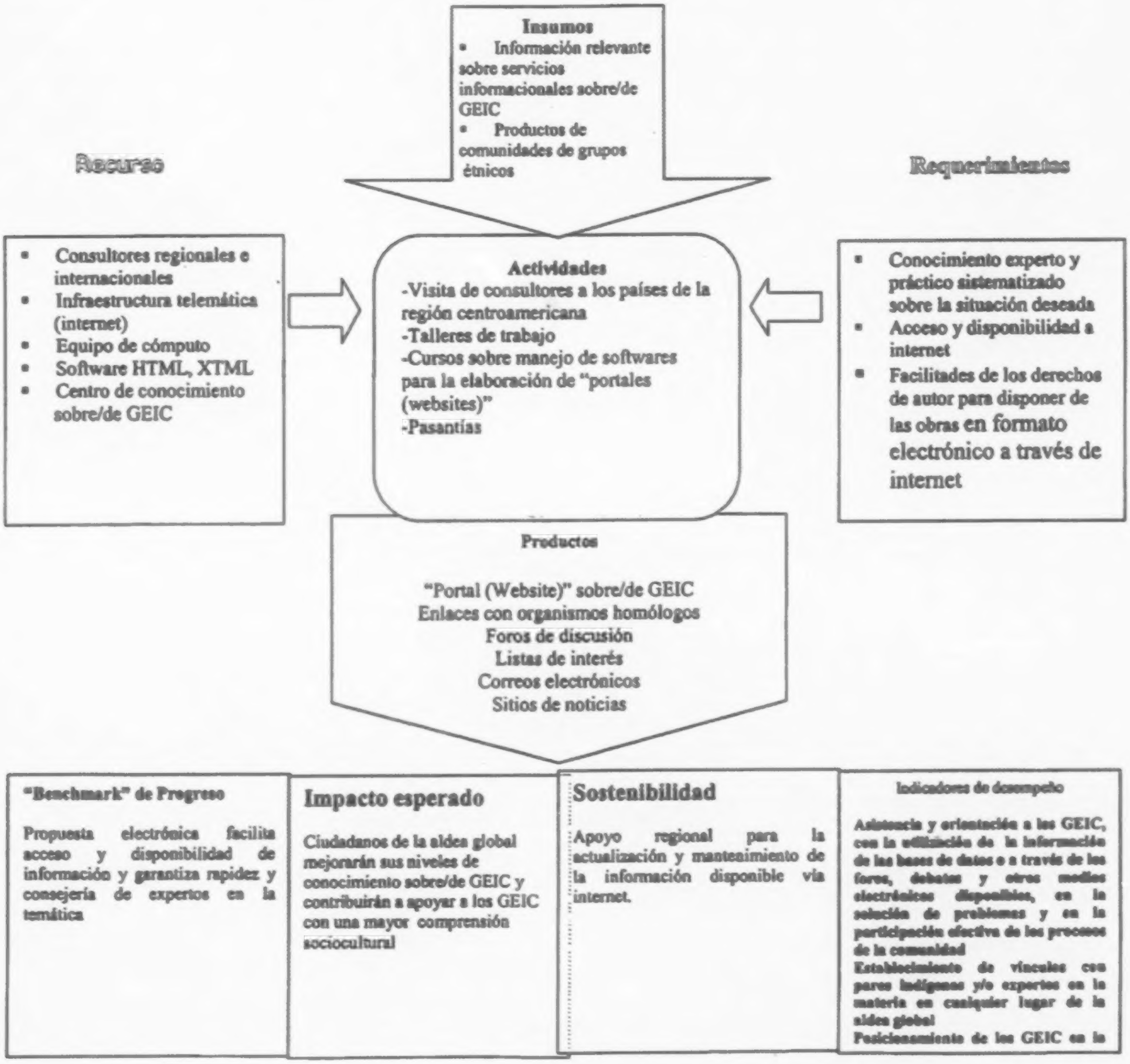
- Adquisición permanente de la información documental sobre/de GEIC
- Actualización en línea de las bases de datos
- Producción anual de al menos un CD-ROM.

Indicadores de desempeño

Consulta a través de Internet desde cualquier parte del mundo
Fortalecimiento de la identidad de los grupos al contar con servicios de información autóctono.

Diagrama 4-3

Resultado esperado 3: “Portal (Website)” sobre GEIC



Insumos
- Información relevante sobre servicios informacionales sobre/de GEIC
- Productos de comunidades de grupos étnicos

Recurso
- Consultores regionales e internacionales
- Infraestructura telemática (internet)
- Equipo de cómputo
- Software HTML, XTML
- Centro de conocimiento sobre/de GEIC

Actividades
-Visita de consultores a los países de la región centroamericana
-Talleres de trabajo
-Cursos sobre manejo de softwares para la elaboración de “portales (websites)”
-Pasantías

Requerimientos
- Conocimiento experto y práctico sistematizado sobre la situación deseada
- Acceso y disponibilidad a internet
- Facilitades de los derechos de autor para disponer de las obras en formato electrónico a través de internet

Productos

“Portal (Website)” sobre/de GEIC
Enlaces con organismos homólogos
Foros de discusión
Listas de interés
Correos electrónicos
Sitios de noticias

“Benchmark” de Progreso

Propuesta electrónica facilita acceso y disponibilidad de información y garantiza rapidez y consejería de expertos en la temática

Impacto esperado

Ciudadanos de la aldea global mejorarán sus niveles de conocimiento sobre/de GEIC y contribuirán a apoyar a los GEIC con una mayor comprensión sociocultural

Sostenibilidad

Apoyo regional para la actualización y mantenimiento de la información disponible vía internet.

Indicadores de desempeño

Asistencia y orientación a los GEIC, con la utilización de la información de las bases de datos o a través de los foros, debates y otros medios electrónicos disponibles, en la solución de problemas y en la participación efectiva de los procesos de la comunidad
Establecimiento de vínculos con pares indígenas y/o expertos en la materia en cualquier lugar de la aldea global
Posicionamiento de los GEIC en la

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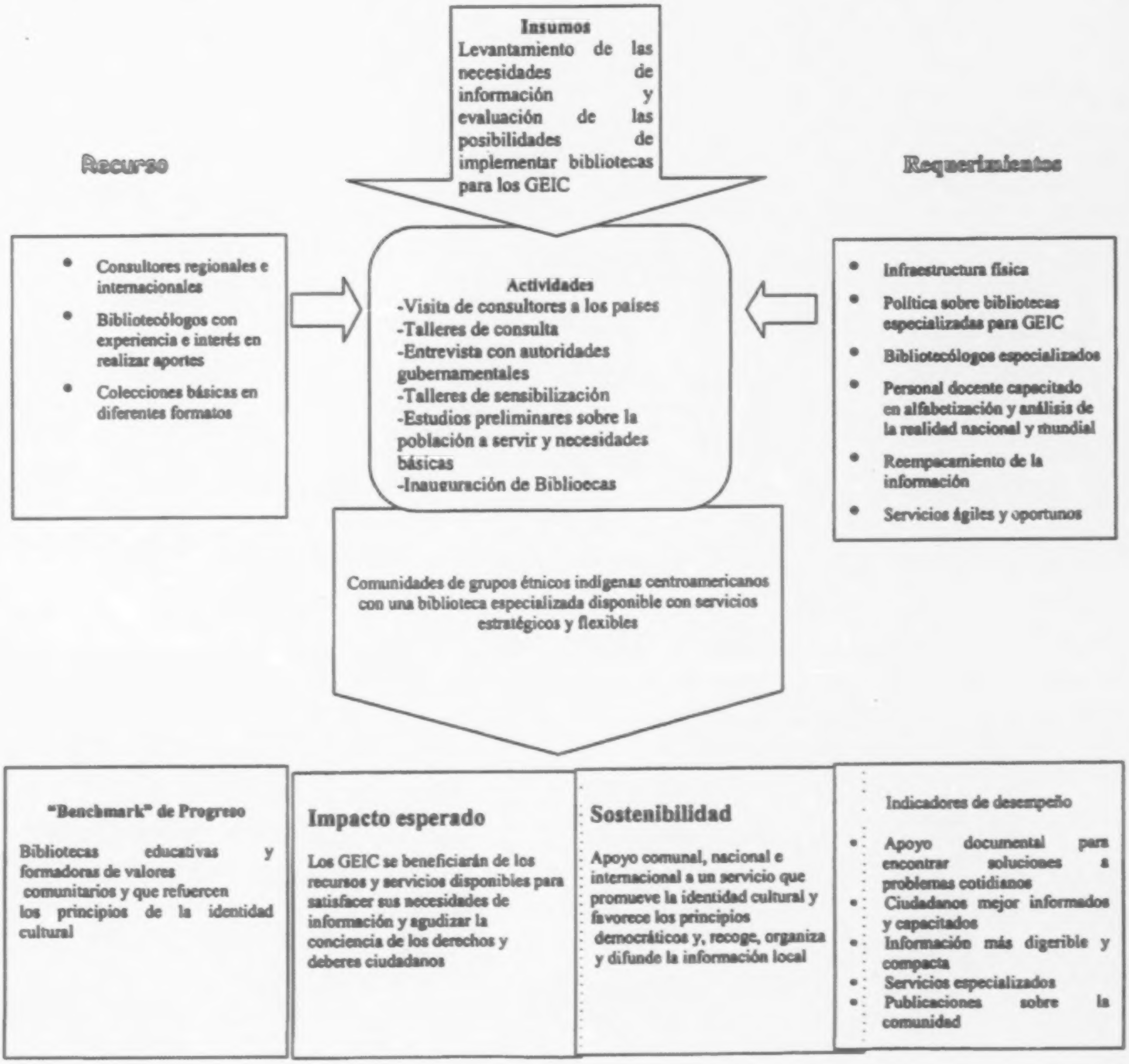
Diagrama 4-4

Resultado esperado 4: Bibliotecas especializadas sobre GEIC



Insumos
Levantamiento de las necesidades de información y evaluación de las posibilidades de implementar bibliotecas para los GEIC

Recurso

- Consultores regionales e internacionales
- Bibliotecólogos con experiencia e interés en realizar aportes
- Colecciones básicas en diferentes formatos

Actividades
-Visita de consultores a los países
-Talleres de consulta
-Entrevista con autoridades gubernamentales
-Talleres de sensibilización
-Estudios preliminares sobre la población a servir y necesidades básicas
-Inauguración de Biblioecas

Requerimientos

- Infraestructura física
- Política sobre bibliotecas especializadas para GEIC
- Bibliotecólogos especializados
- Personal docente capacitado en alfabetización y análisis de la realidad nacional y mundial
- Reempacamiento de la información
- Servicios ágiles y oportunos

Comunidades de grupos étnicos indígenas centroamericanos con una biblioteca especializada disponible con servicios estratégicos y flexibles

"Benchmark" de Progreso

Bibliotecas educativas y formadoras de valores comunitarios y que refuercen los principios de la identidad cultural

Impacto esperado

Los GEIC se beneficiarán de los recursos y servicios disponibles para satisfacer sus necesidades de información y agudizar la conciencia de los derechos y deberes ciudadanos

Sostenibilidad

Apoyo comunal, nacional e internacional a un servicio que promueve la identidad cultural y favorece los principios democráticos y, recoge, organiza y difunde la información local

Indicadores de desempeño

- Apoyo documental para encontrar soluciones a problemas cotidianos
- Ciudadanos mejor informados y capacitados
- Información más digerible y compacta
- Servicios especializados
- Publicaciones sobre la comunidad

7. Evaluación

Productos de las actividades y como un medio de evaluar y retrabajar lo actuado se realizarán:

✓ Informes periódicos que llevarán el pulso del logro del proyecto y la medición del cumplimiento de los objetivos planteados.
✓ La constatación de servicios tales como la creación y mantenimiento "websites" y bibliotecas especializadas que son productos tangibles y fácilmente evaluables.
✓ Estadísticas constantes que permitan conocer el flujo de la información y la pertinencia de los servicios ofrecidos y que permitan tomar decisiones en cuanto a los servicios que se ofrece y el impacto logrado con la población meta.

8. Recomendaciones

1. Integrar un grupo multidisciplinario de investigadores (bibliotecólogos, informáticos, sociólogos, educadores, etc.) que planteen servicios novedosos y oportunos y, den asesoría a los GEIC.
2. Impulsar políticas regionales para la creación de bibliotecas especializadas en las comunidades indígenas centroamericanos.
3. Realizar programas cooperativos sobre alfabetización y consolidación de hábitos de lectura para los integrantes de los GEIC.
4. Crear bibliotcas especializadas para los GEIC con servicios modernos (laboratorio de redes, estaciones de trabajo individuales para uso efectivo de colecciones pertinentes y actualizadas sobre/de las comunidades indígenas.
5. Desarrollar proyectos conjuntos en la región centroamericana y solicitar asesoría profesionales de instituciones exitosas para el diseño, implementación y ejecución del Centro de Conocimiento sobre/de GEIC.
6. Aplicar normas internacionales en todos los procesos y productos del Centro, de manera que permitan un ágil flujo de la información.
7. Centralizar la gerencia y gestión de la información sobre grupos étnicos indígenas centroamericanos en un Centro de conocimiento y descentralizar las colecciones y los servicios, preferiblemente en las bibliotecas nacionales de la región y en las bibliotecas especializadas sobre/de grupos étnicos indígenas centroamericanos.

9. Bibliografía consultada

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IFLA IN JERUSALEM
"Information for co-operation : creating the global library for the future"

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Honestly, I was very hesitant in preparing this speech. Talking about Jerusalem in particular (and not any other city) has been for 53 years (since 1948) an extremely sensitive issue. Being a FAIFE member (Free Access to Information and Freedom of Expression) and being in a "Free Country" I will try to do this freely yet objectively.

The purpose of my speech is (a) to analyze and assess the choice of Jerusalem for the 66th IFLA General Conference and (b) to provide some recommendations and suggestions for similar situations in the future.

By selecting Jerusalem IFLA has failed to fulfill:

1- Its aims,
2- Its General Conference goals,
3- Its General Conference theme (for that year), and
4- Its criteria for selecting a location

Aims:

IFLA is an independent international non-governmental association. Its aims are to promote international, understanding, cooperation, discussion, research and development in all fields of library activity and information science, and to provide a body through which librarianship can be represented in matters of international interest. In other words IFLA is intended to have a global reach in the field of library and information science.

General Conference goals:

"IFLA General Conference is the most important professional international, multilingual, multicultural event within the library and information community."

According to the majority of the delegates, the most rewarding aspect of the conference is the interaction and communication with colleagues from all over the world in addition to building friendship and the idea of global perspective within our profession.

General Conference theme:

"Information for co-operation : creating the global library for the future"

Criteria for selecting a location:

Deciding on a location is a "serious process" according to Ms. Nancy John, IFLA's First VP. In order to consider a potential site, IFLA board must receive very detailed information about the hosting city that must meet several criteria, including geographic diversity whereby IFLA is capable of "reaching people in all different venues" (either delegates, businesses or associations).

Results:

The result was a total boycott by Arab and Islamic countries (even some African countries like Zimbabwe) to attend IFLA's 66th General Conference. Furthermore, the Arab Federation for Libraries and Information (AFLI) had withdrawn completely; instead it held its own annual meeting in Cairo around the same time of IFLA (August 12-17, 2000), eventhough the AFLI Annual Meeting is held in October.

Therefore IFLA Board has made it impossible for members from Arab, Islamic and few African countries to attend. Attendance in Jerusalem totaled around 1800 (down from Bangkok's 1980 registrants in 1999), which included 400 from Israel, 265 from the USA, 207 from the Russian Federation, 88 from France and 85 from the United Kingdom.

Attendance in Cairo (AFLI) totaled more than 300 which included 18 Arab and Islamic countries and they were: Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Saudi Arabia, Sudan, Syria, Tunisia, UAE, and Yemen.

IFLA's organizers claim that when the selection of Jerusalem for the 2000 conference was made over 5 years ago, in 1995 in Istanbul, no formal protest was launched until November 1999 when it was too late to select another site. Apparently, the conflict was brewing since 1997 between AFLI and IFLA. According to Mr. Saad Azzahri Alghamdi, Secretary General of AFLI, several requests from AFLI were sent to IFLA to change the site for "Jerusalem is not the appropriate place to hold the conference." In its part, IFLA board offered to send a member to the Cairo meeting but the offer was declined in an e-mail message from Dr. Abdeljelil Temimi of Tunisia, AFLI President at the time. Unfortunately, the attempts were unsuccessful.

Thus, the concluding statement of AFLI affirmed that "all speakers reminded in their speeches that the timing of the Conference is a reaction to the 66th IFLA's General Conference in Jerusalem, ignoring all international resolutions concerning the Holy City and what would lead to confirming the Israeli occupation. They insisted that the Arab character of Jerusalem is above any deal, due to its [cultural] position and the historical heritage and religious importance that represents to the Arabs, Muslims and

Christians." The Conference also issued a special statement called "Jerusalem Declaration" which included six declarations, and a clear message condemning IFLA for "giving an explicit recognition of Israel sovereignty over the Holy City."

Inescapably political:

Despite IFLA efforts to prove that its 66th General Conference was a non-political non-governmental organization and that it was based only on professional aims, the Conference was inescapably political. As proof I shall cite some facts:

1. Jerusalem was and continues to be a political issue even on universal scale.

2. As a FAIFE member, I have received from FAIFE Office before the Conference a document entitled: Jerusalem 2000: Considerations concerning the 66th IFLA General Conference in Jerusalem. This document included a detailed explanation of the Arab-Israeli conflict and the Jerusalem issue citing all relevant UN resolutions.

3. Two opening sessions proved the contrary. The first delivered by Mr. Zevulun Orlev, a Knessett member who unexpectedly delivered his speech entirely in Hebrew to an audience mostly without translation headphones. This was considered flatly a political statement. Moreover, Mr. Al Kagan, a US delegate, opined at a joint meeting between FAIFE and CLM (Copyright and other legal matters) (IFLA committees), that Mr. Zevulun had deliberately politicized the session by welcoming delegates "to the unified capital of the Israeli State".
   The other session delivered by Mr. Shlomo Avineri, a political science professor at the Hebrew University of Jerusalem, who tried to explain the Arab-Israeli conflict and who gave some background information about the Israeli-Palestinian discussions with President Clinton (at the time), but he presented it from the Israeli perspective.

4. Most lecturers and speakers issued political observations in their speeches. For example:

   - IFLA President Christine Deschamps of France in her opening remarks included a plea "for professional solidarity".

   - At a reception on the grounds of Hebrew University, Rector Menachem-Ben Sasson echoed that the Jerusalem Conference was "a professional statement not a political statement", and he declared that "Jerusalem is open to the world." IS IT?

   - The Swedish journalist, Arne Ruth, one of the guest lecturers, suggested that "Sharing Jerusalem is the only solution." He also concluded that the Western press "fell into the trap of accepting that it (the Jerusalem issue) is a religious conflict, when it is a political one."

Evaluation of the Jerusalem Conference:

The evaluation of the conference which has been prepared in November 1999, by Niels Ole Pors, Associate Prof. at the Dept. of Library and Information Management at the Royal School of Library and Information Science in Denmark, and which was based upon responses to questionnaires given to all attendees, shows the following:

1. In general, the Conference as a whole was the least successful conference of the last 4 IFLA conferences.

2. From the comments, it was evident that many delegates in some ways found that the conference took place in a politicized environment.

3. Many participants thought that some of the welcome speeches by Israelis' high-ranking persons were too political for a conference of this kind.
4. Many delegates first impressions of the country were not that positive. "People arrived in a very security-oriented airport".

5. Smaller proportion was just attendees (about 29.3%). A bigger proportion than the previous 4 years had some kind of official IFLA functions (46% were Standing Committees).

6. The nationality figures indicated that the proportion of delegates from 3rd World countries (17.7%) and Eastern Europe (2.2%) was smaller than normal. Yet a bigger proportion was from USA delegates (23.9%) and West Europe (31.5%). The Israelis represented 8.7% of the delegates.

To summarize, the evaluation stated that the highly political environment of the conference and the debate about its place (Jerusalem), including the Arab boycott (which was considered one of the drawbacks of the conference) had influenced the size and composition of the participants. It meant that participants from 3rd World Countries played a less significant role during the conference than in the previous 4 conferences. Earlier evaluations indicated that 3rd World delegates as an average have a more positive attitude towards the IFLA professional meetings and sessions than delegates from Western Europe and the US. This factor by itself had resulted in a less positive evaluation.

Religious significance of Jerusalem:

It is evident that throughout my speech I have separated the issue of Jerusalem from the Arab-Israeli conflict. Several Arab and Islamic countries have already signed peace treaties with Israel like Egypt and Jordan but they have not todate agreed upon the identity of Jerusalem's Old City. Yet, as per the United Nations Security Council resolutions, "the Old City, with the exception of the Jewish quarter and adjoining Western Wall Plaza, should be ceded to Palestine" (i.e., boundaries of 1967). (UN Resolutions 267 and 726).

We ask ourselves why for 38 centuries, since Jerusalem known existence, which is smaller than half a square mile, has been the scene of many dramatic events and the cause of many wars. It is certainly because of its spiritual and religious status, Jerusalem, the city of prophets, is the cradle of the three religions of the world: Judaism, Christianity and Islam.

Jerusalem became the Jewish national and religious center after its conquest by King David (c. 1000 B.C.) from its original inhabitants who were not of Jewish religion such as Canaanites, Amorites, Hittites and other races. Their rebellion against the Roman occupation resulted in their exile from the city and their dispersion in the world.
Upon the death and resurrection of Jesus in Jerusalem, Christianity emerged, and the city was rebuilt as a Christian city. Since the reign of the Roman Empire, the city remains todate a center of Christian pilgrimage.

As for the Muslims of the world Jerusalem has a fundamental role. In 620, almost one and a half year before the Prophet Mohammed's emigration to Madina, he was taken by the Angel Gabriel from Makkah to Jerusalem where he stood at the Sacred Rock, ascended to heavens and met with many prophets and messengers who had been assembled for him, led them in prayers, returned to Jerusalem and was transported back to Makkah. Due to this event Muslims around the world have a deep devotion and spiritual connection to Jerusalem.

Conclusion:

Allow me to remind you that over the last years there have been similar situations where IFLA members debated on various choices of venues, for instance Moscow 1991, Havana 1994 (where it was impossible for American members to attend), Istanbul 1995 and Beijing 1996. The focus in these cases was on the human rights situation and in particular the lack of freedom of expression and freedom of access to information.

The choice of Jerusalem – a contested place in this world – puts IFLA in the position of depriving automatically many librarians from the Arab and Islamic countries of their right to attend that conference.

Therefore, I am still unable to answer a very important question. Why had IFLA board selected Jerusalem for their 66th General Conference? Maybe the Board (as we are all striving for) made the assumption that by 2000 the Arab-Israeli Conflict and the Jerusalem issue will have been settled. Unfortunately, it is not the case. The situation lately has become much more somber where we see and read every day about non-stop violence with dreadful incidents and horrible deaths.

Finally, I kindly request from IFLA Board to invest more time in selecting properly their sites and that an alternative to the Jerusalem Conference should be selected like holding the Conference in an Arab country which is accessible globally.

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Brazilian History through Journalism

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Abstract:

The paper gives a general view on the beginnings of the newspaper in the country with information on the more significant titles and their role on the history of journalism and impact on social changes between the Imperial and Republican periods. It also describes the present and historical collections and efforts to preserve it through microfilming and digitizing processes. Some statistics are provided for the collection and microfilms available. It gives brief information on the on-line access of the newspaper periodical data bases.

1. The origin of the newspaper collection at the National Library

The newspaper collection of the National Library of Brazil is the most complete nationwide as well as the oldest. One of its characteristics is to assemble all national newspapers of large circulation, as well as regional and local newspapers.

The origin of the collection dates from 1808 with the arrival of the Royal Portuguese Library in Brazil brought by the Regent of Portugal, D. João VI, whom was forced to flee Portugal, after the invasion by Napoleon.

This historic event marked the creation of the National Library.

2. Brazilian Press history

The Brazilian press began in 1808. Previous attempts were aborted by the Metropolis (Portugal), which was concerned with the spread of dangerous French ideas such as the ones behind the French Revolution based on the tripod Liberty, Equality and Fraternity. In 1808 with the transfer of the Portuguese Court to Rio de Janeiro it came along the typographical office, officially entitled Royal press, which decree of its creation in Brazil dates from 10 Set 1808. At the same year it appeared in London, the "Correio Brasiliense" initiative of a renowned journalist who stated that it was easier to print outside national frontiers to be able to be out of reach of censorship of the Prince Regent's Government, since all material had to be revised by the three royal censors of the time.

The "Correio Brasiliense" was not a new vehicle but a doctrinal courier defined as the only Portuguese periodical of the time to have independence of views, since it was edited outside of the royal domains and had a leading figure behind it, who demonstrate all the gaps and flows of the Brazilian administration. This newspaper started the press tradition in Brazil to be the dogwatch of the public administration.

This newspaper circulated monthly from 1808 to 1822 printed in London and covered all the period of the transfer of the Royal family to Rio de Janeiro up to the Independence. The National Library maintain its complete collection of 29 volumes.

Meanwhile, in Rio de Janeiro, it was launched the "Gazeta do Rio de Janeiro", which was to be the first Brazilian newspaper printed in Brazil. Naturally, it was an official vehicle and represented the government views without criticism or doctrinal opinions but solely news. Other newspapers appeared to reinforce this tendency such as "A Idade de Ouro" (printed in Bahia in 1811).

It is important to identify the role of the press in the evolution of the democratic thinking and that is why the "Correio Brasiliense" even though published in London is mentioned here. It's counter attack was the launching of the "O Investigador Português", which had the main task to publicize widely government views.

Certainly, these tendencies were before the Independence of Brazil and it is relevant to stress that journalism played an important role on the process of development of the political thinking of the nation and national press campaigns reflected the new thinking and timid steps towards a politically strong nation.

This movement was spread in the provinces, which produced several newspapers. The first was the "Compilador Mineiro" in Minas Gerais in 1823; "O Farol Paulistano", a liberal newspaper in 1827 and in Rio Grande do Sul the "Diário de Porto Alegre" in 1827.

One eco of the independent thinking was in 1822 when the Portuguese dissolved the Legislative House, and the provinces fought against this action that represented the orientation of the Central Government. One of the newspaper, the "Gazeta Pernambucana" which in 1823 became a column for protests against despotism and the lost of liberal constitutionalism, which was a goal to be achieved in the views of the intellectual classes.

Another important step in the history of the Brazilian press was the newspaper "Sentinela da Liberdade na Guarita" de Pernambuco, which appeared in 1823 in the middle of the constitutional fights of the Brazilian Empire. This newspaper tried to raise the public opinion against the danger of not having a Liberal Constitution.

There are innumerous examples of the efforts of the liberal thinking through the press but it is the movement of abolition of Slavery and the fight for the Republic that have marked the history of Brazil by way of journalism and the influence of eminent journalists who fought for these ideals.

The role of the press was extremely relevant and decisive to reach, gradually, the total abolition of slavery. All newspapers from the provinces joined the campaign to fight against slavery. Mainly the "Diário de São Paulo", which today is the most intellectual and politically oriented newspaper with the largest circulation in the country which in 1889, with the Republic, altered its title to "O Estado de São Paulo".

Intellectual and eminent journalists lead the way in their columns and advocate the abolition of slavery along with the campaign for the Republic, mainly after the end of the war with Paraguai. One of the leading figures was an ex-slave turned into poet and journalist among very illustrious names such as Rui Barbosa.

Finally the Aurea Law, in 1888 abolish the slavery in Brazil, and the Republic, after one year, imposed itself little by little thanks to the very decisive press action to propagate the ideals of the Republic.

It can be said with certainty that the newspaper press in Brazil had a very active participation in all moments of the history of the nation, which places our newspapers collection as a tombstone for research on the cultural and political development of the Brazilian Nation.

3. Current Collections and legal deposit

Legal deposit was one of the first preoccupations of the Imperial government after the Independence, in 1822. The aim was to collect and preserve all printing production in the country either bibliographical or serial. So in 12 of November 1822, it was determined that the National Printing Office should send to the Imperial and Public Library of the Court – the National Library of today – one sample of all works such as books or serials, pages or volatile material printed. This first act established the legal deposit of published material in the independent Brazilian nation. This act had been preceded by other acts while the government was still in Portugal, such as the act, which obliged the deposit of material printed by the Royal Press (Impressão Régia), which signed in 1805 by the Prince Regent made it obligatory the deposit of all printed material from all printing presses.

Finally, after several acts in between, in 20 December 1907 it was promulgated the Decree 1825, which is on force still today and took away from the states the right to collect material and centralized it at the National Library.

The role of the newspaper collection was not always understood by the different administrations at the Library and the physical conditions of the collections are a reason for concern with their brittleness and many years of bad air conditioning and lack of maintenance and good preservation practices.

The collection is the biggest in the country and it assembles more than 55.250 titles of serials of which 5.244 are newspapers with 297.516 collections with the rate of receipt of newspapers fascicules around 37.000 annually, covering wide circulation newspaper as well as regional and local circulation, which vary enormously in their coverage since the largest circulation is around 471.000 copies. In total there are 465 daily newspapers in Brazil of which less than 9 newspapers have a circulation of 100.000. Special agreements with the Brazilian Association of Regional Newspapers (ABRAJORI) ensure the receipt of 1800 regional titles monthly, covering small circulation newspapers with local news.

The newspaper collection of the National Library is considered the last resort collection of the daily printed collective memory, since the policy of newspaper editors are to discard their back issues and any social and cultural research on historical developments rely on the National Library collection.

For this reason the present Administration is giving a strong support to the combination of the microfilming for preservation alongside with modern techniques of digitizing and Internet access.

4. Newspaper Microfilming for preservation

So it is the responsibility of the National Library to preserve serial and newspaper collections and it has developed a national plan to fulfill this historical task.

The National Plan of Microfilming **(PLANO)** started back in 1978 aiming at researching, identifying and reproducing microfilms of newspaper nationwide to complete the national newspaper collection at the National Library and at the same time, to establish local microfilming units at Public Libraries or university libraries which should continue the work of preservation microfilming of their collection. It operates through agreements with nine institutions from five Brazilian states, providing technical expertise to install microfilming laboratories and offer technical courses for recycling personnel, while producing technical manuals to be distributed to students and collaborating institutions. This project was very successful but costs went up since raw material needed was not founded and the project faded away slowly.

In consequence, on 1997 with the change of administration an analysis was made and it became clear that the microfilming laboratory at the National Library was in crisis with broken up machines, lack of raw material and staff and it had to be given a remodeling priority Since then, in order to carry on with routine work, as well as with the national commitments, the microfilming laboratory has been totally remodeled to solve problems of faulty air conditioning, lighting and electrical wiring. The existing equipment acquired back in 1982 underwent major repairs. Additionally, new equipment was obtained through donations from Lampadia Foundation.

It resulted, at present, in a very active laboratory with a program to receive all newspapers, to fulfill gaps and obtain back issues to complete the national newspapers collection. An expansion of the Laboratory was also undertaken which added a storage area for microfilm masters which houses an additional 20.000 rolls totaling 40.000 (200 linear meters each) in 60 square meters with compact shelving. Nevertheless, this expansion is still not ideal, but it has solved the storage problems, temporarily.

Apart from regional agreements and individual requests ten of the major daily Brazilian newspapers have a contract for current microfilming reproduction, for which 10.000 copies in paper and 697.000 photograms were made in 2000. It also microfilms systematically 72 current serials, and carries on with the Library of Congress a joint program for microfilming nine current titles of Brazilian newspapers to be added to their collection. Statistics for the year 2000 show a production of around 1000 rolls (totaling 1 million pages), providing a basis on which to forecast microfilm production in the future.

Another important development is the availability on the Intranet of a Microfilm Database registering 2.600 microfilmed serial titles, current and extinct at the Web site, making it possible to request copies while consulting the database. Remote users will be informed of the microfilms in existence and can make requests on line to obtain copies in FTP, diskettes or CD-ROM.

5. Preservation and on line access of historical collection

The 19th century newspaper collection at the National Library has been processed separately from the current newspaper collection and is located at the Rare Collection Division. For this reason, it has separate cataloguing and its access is restricted to researchers. In order to enable its access, subrogates forms, either microfilm or digital archives, are been made available.

The historical collection has gone through the process of preservation and is kept in boxes after clearing and dusting. This treatment also intervenes in all newspaper going through microfilming to keep it out of use but in good conditions of preservation.

Also, for the microfilm reproduction a catalog locates newspapers in other libraries in Brazil. This collaborative effort is also part of the ABINIA's proposal of identifying rare collections throughout Ibero American countries which produced a CD-ROM by the National Library of Spain entitled *Novum Regestrum.*This project also intends to go on line shortly to enable researchers to access it by Internet. As part of this cooperation it contributed to ABINIA's publication on Iberoamerican newspapers of the XIX century, which also was produced in CD-ROM.

The Brazilian catalog of Rare newspapers is available at the site of the National Library of Brazil and permits download and on-line contribution from the participating libraries to update its catalog as result of the conversion done in 1999 from the Micro Isis format catalog to a new platform on SQL. It assembles 7.145 registers including historical newspapers (5.850 titles) and rare books (1.295 titles) already microfilmed.

6. Move to a Virtual Collection

The creation of art image database for maps, photographs, rare newspapers and manuscripts at the National Library is worth mentioning since it opened up horizons for a large-scale project. The availability of these images connected to the bibliographical register at the Web site has created a new situation of providing remote users with material available only at the National Library.

Nevertheless, a digitizing project per se, implies a series of measures and a staff trained in selection, conservation, digital reproduction and a sound methodology for digitizing, including metadata identification. At present, the National Library has obtained a grant to start Retrocom of newspaper collections and digitizing of part of its collections and building a metadata database gateway.

The virtual library catalog make it possible to obtain copies on paper collection, as well as digital files with image and full text resulting from the digitizing process.

These on line files permit the downloading of records, images and full text from USMAR, ISO 2709, ANSI, Z3947, OEM accessing with any combination according to the software and platform in use by the library. The only unique feature necessary is online access and Z39.50 platform to download registers by libraries which are already linked to the National Library through the Electronic Consortium of Libraries that permit access (login and password) to university and public libraries with public funding.

At present, a digitize unit deals with equipment that transfers from microfilm and film to digital object and it is operating at the Microfilm Laboratory. The program covers uniquely these formats since the machines in question operate solely from these supports.
A small portion of this material selected among the rare book collection has already been digitized and made available at the Web site for information.

Already a footage of 25.100 rolls of microfilm corresponding to around 12.700 titles and 20 million pages will be object of a selection for digitizing. Out of this mass of information the part concerning serials is contained in 2.000 rolls for historical serials,8.600 for extinct serials and 12.800 for current serials. On the other hand, funds are being identified to provide for the acquisition of new equipment, which will work from paper support to digital objects.
It is hoped that these new features of online data bases, as well as virtual library will modernize the services provided at present for newspaper research by local and remote users.

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News from El Dorado: Newspapers and the California Gold Rush”

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Sacramento, CA
USA

When James Wilson Marshall discovered gold at Sutter’s Mill on the South Fork of the American River on January 24, 1848, he not only touched off the greatest gold rush the world had ever seen but also ignited one of the great writing frenzies in American history. Guidebooks, diaries, and letters all told of a new El Dorado where unimaginable riches could be found simply by picking them off the ground. But it was the newspaper that served as the chief mechanism by which the good news from California rocketed around the world. Furthermore, the newspaper played a major role in informing anxious gold hunters of how to get to California as quickly as possible, what to expect once they got there, and finally, as the golden dreams turned to cold reality, telling its readers that digging for gold was really backbreaking, dangerous work to be undertaken only by the young and strong.

In this paper, I will cover the discovery and its reporting by the local press, the spread of the news, the experiences of the Argonauts as recorded in the national and international press, the singular value of newspapers as a link to home, and the unprecedented birth and death of newspapers in California during the first years of this international rush for riches.

News of Marshall’s great find which took place east of present-day Sacramento spread slowly at first, but on March 15, 1848, a tiny article appeared buried in the *Californian* of San Francisco with the headline “Gold Mine Found.” It went on to report: “In the newly made raceway of the Saw Mill recently erected by Captain Sutter, on the American Fork, gold has been found in considerable quantities.” Local residents greeted this news with resounding indifference. The rival and incredulous *California Star* did not even report the news until April 22, 1848.

However, as more and more people came into Sutter's Fort or San Francisco and Monterey with bottles and sacks filled with gold, indifference turned to rapt attention. The *Californian* on May 17 (a full two months later), reported:

> "The Gold Mine Again. We have been informed by a gentleman recently from the gold region that DIGGING continues brisk, with a great demand for spades and pickaxes. Many persons have already left the coast for that region, and considerable excitement exists in our midst, which bids fair to become quite a gold fever. The merchants and mechanics are closing doors, the lawyers and alcaldes [mayors] leaving their desks, the farmer neglecting their crops, and whole families forsaking their homes, all suffering from the effects of this fever."

This is the first use of the term "gold fever," an expression that would shortly become universal to describe the California gold mania. Still, there were skeptics. Edward Cleveland Kemble, the editor of the *California Star,* seeing his town deserted, made a trip to Sutter's Mill to investigate what this gold fever was all about and pronounced the whole thing "all sham–a superb take in, as was ever got up to 'guzzle the gullible.'" Despite Kemble's doubts, by late May, the run for riches had turned into a stampede, and on May 29, the *Californian* issued a broadside with the following notice:

> With this slip ceases for the present the publication of the *Californian* – "Othello's occupation's gone!" The majority of our subscribers and many of our advertising patrons have closed their doors and places of business and left town. The whole country, from San Francisco to Los Angeles and from the sea shore to the base of the Sierra Nevada, resounds with the sordid cry of "*gold!* GOLD!! **GOLD!!!**"

Kemble's *California Star*, likewise announced its suspension on June 14. Both papers, however, returned in August when others realized more money could be made in town providing services and selling products to the miners.

James H. Carson, a writer for the *San Joaquin Republican* of Stockton, left us the best description of a case of gold fever. It was his own. Upon hearing of the discovery of gold in the foothills of the Sierra, Carson, then an army sergeant stationed at Monterey, deserted his post. He recalled:

> A frenzy seized by soul: unbidden, my legs performed some entirely new movements of polka steps. Piles of gold rose before me at every step; castles of marble, dazzling the eye with their rich appliances; thousand of slaves bowing to my beck and call; myriads of fair virgins contending with each other for my love– were among the fancies of my fervid imagination. The Rothschilds, Girards, and Astors appeared to me but poor people; in short, I had a very violent attack of the gold fever.

News of California placers first reached the newspapers of the eastern United States on August 19, 1848, when a letter from a "volunteer" correspondent appeared in the *New York Herald.* This letter originally written on April 1, however, stressed the area's overall mineral wealth ranging from copper to coal without placing any real emphasis on the precious metal. It did not create much excitement. The writer casually noted "I am credibly informed that a quantity of gold was picked up lately in the bed of a stream of the Sacramento," and concluded with the following colorful words: "I would predict for California, a Peruvian harvest of the precious metals, as soon as a sufficiency of miners, &c., can be obtained." How right that prediction turned out to be! Little did he know that from 1848 to 1853, California would yield well over $200,000,000 dollars worth of the glittering dust and nuggets, an incomprehensible sum of money at the time.

Those closest to Upper California, quite naturally, heard the news first. By the spring of 1848, merchants and sea captains spread the glad tidings to the Sandwich Islands, and the June issues of the Honolulu *Polynesian* and *The Friend* ran articles concerning the excitement. By August, word had spilled northward appearing in the *Oregon Spectator* of Oregon City, and by September, in the New Orleans *Daily Picayune*. The *Spectator*, touched with its own case of gold fever, hysterically declared "almost the entire male population had gone gold digging in California." Reports of this fabulous Golconda soon appeared in the *gazetas* or newspapers of Mexico and Chile causing a mass northward migration. Latin Americans, already experienced in mining, literally saw a golden opportunity, struck it rich, and sent home a fortune in gold. It did not take long for Australia and the Orient with its maritime connections to receive the news, and soon, a flotilla of ships was bound for the banks of the Sacramento. In short, the world rushed in.

Intelligence concerning California's riches gradually reached the population centers of the United States via returned travelers and articles in San Francisco newspapers. At first, however, the eastern and Midwest press greeted these reports of a new El Dorado with much skepticism. The New York *Sun*, for example, claimed that the metal found was really mica and warned its readers "that all is not gold that glitters," and the East Bennington *Vermont Gazette* surmised that there was "far more moonshine than Gold" in California. The *Saint Louis Daily Union* for October 12, 1848, proclaimed "that the gold fever was an unmitigated humbug, in which knaves and fools were the partners."

All of this changed when President James K. Polk, in his annual message to Congress said, "The accounts of the abundance of gold in that territory are of such an extraordinary character as would scarcely command belief were they not corroborated by authentic reports." These authentic reports, written by government officials on the spot including military governor Colonel R. B. Mason and Lieutenant William Tecumseh Sherman, the future Civil War general, gave California gold instant credibility. To further dramatize the extent of the mines, Mason sent to the War Department 230 ounces of placer gold in a tea caddy. Electrified, the press seized the moment by printing Mason's report in scores of newspapers. Gold fever spread like wildfire, and everyone, to use a 19th century expression, was "off to see the elephant." Horace Greeley in his *New-York Tribune* proclaimed "The Age of Gold" and the neighboring *New-York Express* exclaimed "never were more people worked up." The *Hartford Daily Courant* for December 6, 1848, wrote, "The California gold fever is approaching its crisis. We are told that the new region is El Dorado after all. Gold is picked up in pure lumps."

It did not take long for this glorious and fantastic news to leap across the Atlantic. London and Liverpool papers in December 1848 and January 1849, reprinted the information from American newspapers. A month later, Parisian papers carried the intelligence from America and described the "auriferous fields" as 800 miles in length and 100 miles wide strewn with "gold dust, gold nuggets, gold ingots, weighing from one to twenty-four pounds." Newspapers from Hong Kong to Hamburg wrote in glowing terms of California and its gold. If one believed these accounts, men, women, and children using only spoons and pocket knives were literally harvesting gold by the bushel. Reports of making thousands of dollars in far off California when skilled laborers in the big cities made a dollar a day could not be ignored. With the aid of the world press, California proved to be an irresistible magnet. Furthermore, social unrest beset much of Europe and opium wars wracked China at the close of the 1840s, and some saw California as a safety valve, a new promised land. The French called for the colonization of California and one English writer wrote that even if there was no gold, go there anyway as the opportunities would be much better. Cornish miners from the south of England read these tales of gold with interest, quickly set sail, and within a few short years, operated some of the most lucrative mines.

Not surprisingly, these press reports became highly exaggerated. As one wordsmith put it: "A grain of gold taken from the mines became a pennyweight in Panama, an ounce in New York and Boston, and a pound nugget in London." Over and over, accounts appeared in the papers telling of incredible gold strikes, boulder size nuggets being dug up, and the streets of Sacramento and San Francisco being paved in gold. Stories concerning high prices, lawlessness and violence, rampant gambling, absence of women, and lack of decent food and basic sanitation were overlooked during those frenetic early years of the rush.

With gold in great abundance confirmed by the president, the newspaper played a vital role first by publishing eyewitness accounts from Argonauts returning home with bags of gold, and then providing information and advice on the best and quickest way to reach the golden shore and what to take. Every scrap of news was printed and reprinted. Proprietors of newspapers editorialized on the economic and social impact of so much gold flooding the market and the upheaval it caused in so many communities. The papers carried sermons by ministers warning would-be gold hunters of the evils of mammon and the untrammeled vice that reigned in California. "Take your Bible in one hand and your New England virtue in the other," railed one preacher. Soon the papers in the port cities of the eastern United States and Europe were filled with announcements for California bound ships. One of my favorite Gold Rush paintings beautifully depicts a raging case of gold fever in Long Island, New York. Titled *California News* and painted by William Sidney Mount in 1850, it depicts a group of anxious looking men and women in a post office with walls plastered with circulars announcing sailing dates for California. But, symbolic of the importance of newspapers, the central figure holds a copy of the *New-York Daily Herald* which he is reading to a transfixed audience.

Those in the interior of the United States used the newspaper as a means of promoting routes through their city or town as the "shortest and best" way to reach California. The *Arkansas State Democrat* of Little Rock, the *Louisville Courier*, and *Daily Missouri Republican*, for example, all touted their place as the best place to begin and purchase supplies, and not surprisingly, wrote disparagingly of other cities and routes. The Little Rock newspaper warned its readers that those who embarked from St. Louis and took the northern trail faced entrapment in the snow and "starvation and cannibalism." They did not, of course, mention that their route took gold seekers through the forbidding deserts of Arizona and southern California.

It is fascinating and amusing to read the advertisements that appeared in newspapers of the day for California products. The papers happily published endless columns advertising such items as "Fever and ague and disinfecting liquid," "Indian Rubber Outfits," white rubber tents, air beds, preserved meats, and every possible type of weapon and article of clothing. Daguerreotypists did a booming business taking pictures of Argonauts as a memento for loved ones before departing for "Kalifomy." Taking advantage of the gullible, advertisers trumpeted a variety of gold washing machines which, of course, proved to be completely useless and were quickly trashed upon arriving in the mines. Editor Horace Greeley correctly noted, "The only machinery necessary in the new Gold Mines of California is a stout pair of arms, a shovel and a tin pan." I might add that his paper carried an advertisement for "California Ginger-Bread" as "just the thing to stay the stomach" while digging for gold or as a remedy for seasickness.

The trek to California resulted in hundreds of accounts appearing in the newspapers. Rarely in the history of the nation had so much printer's ink been expended. This after all represented the adventure of a lifetime, and fortunately, many literate people with keen powers of observation took the trouble to record their experiences in letters and diaries. Those taking the overland trail frequently sent letters back home. These epistles were enthusiastically published in the hometown newspaper and eagerly devoured by local readers hoping to hear about a loved one or contemplating a trip themselves. Those going by sea encountered a different type of adventure than the "overlanders." The vast majority faced a long and tedious incarceration on ship and devised all kinds of ways to pass the time. Some of the more imaginative ship passengers combated the boredom by actually producing their own newspapers. Since they did not have access to a printing press, they wrote it out by hand. Once the editors completed an issue, they either passed the sheets around, posted it in a prominent place, or, following afternoon tea, read it out loud on deck to fellow passengers. Most contained summaries of the voyage, poetry, cartoons, and humorous sketches. I know of twelve such examples. At my own institution, we have seven of eight issues of a folio-size newspaper called *The Barometer and Gold Hunter's Log*. It was written between February 21, 1850 and April 14, 1850, onboard the barque *Mary Waterman*. Those going by way of the Isthmus of Panama frequently had to wait weeks to pick up a California-bound ship on the western side. J. B. Bidleman saw an opportunity and catered to stranded and bored Americans in Panama City when he inaugurated a weekly called the *Panama Star* on February 24, 1849.

Because of the incredible stories that daily poured out of the mining camps, a number of journalists made their way to California as either observers or as actual gold seekers. Consequently, some of the best travel writing from the 19th century centered on the run for gold. To illustrate, E. Gould Buffum of the *New York Tribune*, William Dennison Bickham of the *Cincinnati Gazette*, Dr. James Delavan of Jonesville, Michigan, and Ramón Navarro, a future Argentinian journalist, all penned wonderfully descriptive diaries and letters. Without doubt, Bayard Taylor of Greeley's *New-York Tribune*, stands as the best. His book, *El Dorado or Adventures in the Path of Empire* went through eight authorized and three pirated editions by 1859 and it is still in print today with the last edition published in 2000. Another journalist worth noting is Alonzo Delano, better known in California by the sobriquet "Old Block." He published one of the most compelling series of overland letters which appeared in the *Ottawa* (Illinois) *Free Trader*, *New Orleans True Delta*, and the *Galena* (Illinois) *Weekly North-Western Gazette*. He wrote "Gold is the talisman. Gold is the lamp of Aladdin. Gold is the magic wand."

Once people arrived in California they thirsted for news from home. Letters from family and friends became more precious than gold for these homesick miners. Long lines formed outside the post offices when the steamers arrived with mail from home, and some enterprising souls made a substantial sum holding places in line or selling coffee, pies, and newspapers to those in the queue. The hometown newspaper ranked second only to the letter in importance as far as reading matter was concerned. While not personal, these columns of tiny type provided the lonely Argonaut with a physical link to loved ones. Because of this, the arrival of a batch of newspapers caused almost as much fuss as a shipment of mail, and it did not matter if its masthead bore a many months-old date. The aforementioned Bayard Taylor wrote with astonishment in 1849 about a man from New York who arrived with 1,500 copies of his own

Tribune and sold them all within two hours for a $1.00 a piece! If adjusted for inflation, that amounted to around $20,000. Seeing this golden opportunity, Taylor immediately searched his valise for newspapers and turned them over to a newspaper merchant at a 4,000% profit. Four years later, New York newspapers still commanded outlandish prices. In 1853, the Reverend John Steele paid $1.00 for a copy of Greeley's weekly. He touchingly told how the paper substituted for a letter from home:

> Others, anxious because the expected letters had not come, usually tried, after the style of an auctioneer, to buy a paper containing the general news from their part of the country. It was common at such time to hear the exclamation, "Who has a paper for sale from New York?" or from such and such places; and people receiving papers, after their perusal, sometimes sold them for fifty cents or one dollar. Some receiving bad news, went sorrowfully aside to weep.

A natural outgrowth of this insatiable need for newspapers saw the rapid development of bookstores, literary societies, and club libraries. By the early 1850s, virtually every city, town, and mining camp provided newspapers. Reading a New York or London newspaper offered a much more positive and civilizing alternative to the gambling dens, drinking saloons, and whore houses. Bookstores in the gold camps boasted that they offered a full line of Atlantic and European newspapers. The Merchants' Exchange in San Francisco in 1849, for example, opened a reading room for visitors to read Eastern and European newspapers charging 75 cents a day or $2 a week for the privilege. A year later, as reported in the April 25, 1850 *San Francisco Daily Alta California*, a private club library offered not only a wide array of "fictitious, historical, and scientific works" but also an "abundance of papers, of all tongues, parties and sects." The *Alta* proudly noted that San Francisco now had a place for "the gold of the mind."

Concomitant with the rise of reading rooms was the establishment of newspapers up and down the state. By the early 1850s, California witnessed an unprecedented demand for a local press and editors and typestickers readily met this need. The majority were crude weekly affairs consisting of two to four pages and often filled with old news received from eastern and European papers. Most gold camps of any size spawned a newspaper that lasted as long as the gold held out, and when a new strike was made, the editors loaded the press in a wagon and headed off for a new opportunity. The larger cities and towns often enjoyed daily and multiple newspapers. San Francisco, in fact, could boast that it not only consumed more champagne than Boston but it also published more newspapers than London. The San Francisco press even printed special "steamer editions" to be placed on outbound ships carrying news of California to the world.

One printing press had an impressive record compiling a number of newspaper firsts worth noting. When the Mexican governor of California wanted to print forms and other governmental documents, he imported an old Ramage screw-type press from Boston in 1832. That same press Walter Colton and Robert Semple used to print California's first newspaper, appropriately named the *Californian* in 1846. The following year, new owners moved the *Californian* to San Francisco and took the press with them and continued its use until the paper merged with that city's first newspaper, the *California Star*. The merger formed the *Alta California* which lasted into the 1890s and rightly received the appellation of "the Mother of [California] Newspapers." Edward Kemble took possession of the press, transported it to Sacramento, and on April 28, 1849, printed the river city's first newspaper, the *Placer Times*. Kemble, by the way, did not have a large enough typeface for his masthead and used a jackknife to carve out the words "Placer Times." Later, the same Boston press headed south to print Stockton's first newspaper, the *Stockton Times*. The venerable machine continued its amazing journey and turned up in the gold mining town of Sonora, and on July 4, 1850, produced the *Sonora Herald*, the first newspaper published in the mines. From there it made its final journey winding up in the rough and tumble town of Columbia, and once again, gave birth to that town's first newspaper, the *Columbia Star* on October 25, 1851. Regretfully, this historic press became the object of a law suit and vandals got hold of the press and put the aged relic to the torch in the middle of the street. As Kemble lamented: "A greater outrage never desecrated the name of an American town."

Newspapers published in the gold camps and cities are invaluable for recording California's astonishing growth not only in population but also in infrastructure, culture, and events. Conflicts between American and foreign miners, attacks by and against Native Americans, the formation of Vigilance Committees, and the numerous hangings, shootings, fires, and floods provided ample subject matter for pioneer editors. Early on, this center of wealth imported world class entertainment. Consequently, the goings and comings of great pianists like Henri Herz, the performances of the notorious dancer Lola Montez, and the concerts of Kate Hayes, "the Swan of Erin," as well as hundreds of Shakespearian performances received adulatory attention in the local press. The advertisements that ran in these papers provide fascinating reading. One can quickly obtain an appreciation of how rapidly goods and services of all kinds were imported into California from the finest liquors to barrels of nails.

California, with its unparalleled riches, quickly became the most heterogeneous spot on earth with the influx of peoples from all points of the globe. The California press reflected this extraordinary ethnic diversity. Soon French and German language papers flourished; *La Estrella*, printed in Spanish and English served Los Angeles, and on April 28, 1854, *The Golden Hills News*, a Chinese paper rolled off the press. Papers representing a multitude of political, religious, and cultural beliefs sprouted. Others specialized in gossip, humor, theater, literature, and science.

As a testimony to California's improbable and rich newspaper history, Edward Cleveland Kemble, that pioneer editor who earlier had called the gold discovery "a sham got up to guzzle the gullible," wrote a history of newspapers in the Golden State published in the Christmas 1858 supplement of the *Sacramento Union*. It consisted of thirty-five columns of tiny type, enough to make it the longest article ever published in California up to that time, and if printed in book form, a tome of over two hundred pages. Kemble presented a remarkable, fact-filled summary of the years 1846 to 1858. Using a questionnaire, he received returns on 324 different titles from forty-eight localities. This represented an impressive figure when you consider that prior to 1848, California supported just two newspapers and a non Native American population of less than 15,000. San Francisco led the way and Kemble provided the following summary of the diversity that characterizes the city and California to this very day:

> They [newspapers] number 132 in all, and the united number of their proprietors, editors and reporters is more than a thousand. No city in the world can boast a newspaper press so great in its development, so singular in its character, so wonderful in its fortunes. The papers have been printed in six different languages, have represented nine different nationalities, have devoted themselves to the interests of religion, politics, morals, law, medicine, literature, commerce, agriculture, news and slander; have preached eight

> different forms of religion, and have been the organs of seven distinct political parties.

This pioneer newspaper historian went on to write that most were short-lived affairs and that California was a virtual newspaper graveyard. Of its editors and proprietors, one was killed and four others wounded in duels. One died at the hands of an assassin and another seriously wounded with a knife – all for articles they had written. Two others wound up in penitentiaries; one took to the pulpit, and two others to the stage. These figures do not take into account the number of newspapers destroyed by the devastating fires and floods that ravaged many Gold Rush cities. As Kemble ruefully observed, "Not one can be said to have become rich from the profits of their newspapers."

I will conclude with a colorful passage from those rambunctious days which I think provides the best happy ending experienced by a gold seeker and demonstrates the magnetism of the Gold Rush. It appeared the *Boston Chronotype*:

> A man had returned to California with gold to the amount of 64,000 dollars, which he deposited in one of the mints. He took off his old threadbare unmentionables and was about to throw them away, but his wife (good prudent woman) laid hold of them, and, with a trifling effort, took 23,000 dollars - worth of gold-dust out of them.

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Mesplet to Metadata: Canadian newspaper preservation and access

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Abstract:

Fleury Mesplet was one of the first printers of newspapers in North America. He began a long tradition of publishing under difficult circumstances. This paper traces the development of the National Library of Canada's newspaper collection in conjunction with the Decentralized Program for Canadian Newspapers. The paper also presents a sampling from the collection in order to illustrate the rich variety of the press that has followed in Mesplet's footsteps.

The first newspaper published in what is now Canada was the *Halifax gazette* by John Bushell in 1752. Bushell was a Bostonian who took over the press from his business partner, Bartholomew Green, grandson of the first North American printer, Samuel Green. He printed a newspaper that largely reflected the view of the colonial government on whose patronage it depended. The paper has been described as semi-official, as it published statutes, laws, proclamations, and treaties; and semi-independent, as it published local news and advertisements as well as some opposition letters. As Halifax was only three years old at the time of the establishment of the newspaper, the circulation figure for the paper was a grand total of 72.

There is strong evidence that because of Bushell's other interests, much of the composition and printing of the paper was done by his daughter, Elizabeth. Around 1760, Bushell formed a partnership with Anthony Henry who inherited over the entire business on the death of John Bushell four months later. Henry's apprentice, Isaiah Thomas, contravened the Stamp Act and lost the paper its official status which was transferred to another printer and newspaper plant. Henry regained his paper in 1770 after quietly publishing an innocuous rival, the *Nova Scotia chronicle and Weekly advertiser,* that was less expensive than the *Gazette* and contained more local news. The old *Halifax gazette* became the *Nova Scotia gazette and weekly chronicle.* From

1776 on, a number of loyalist presses; i.e. loyal to the British crown, sprang up in Nova Scotia as Boston printers exiled themselves and their presses to that province.

One of the oldest continuing newspapers published since 1778, was the Montreal *Gazette*. This was the second paper to be published in Lower Canada and the first to be published in Montreal. Its founder, a Frenchman, Joseph Fleury de Mesplet, became involved in the press largely because of the American Revolution. Benjamin Franklin, Samuel Chase and the Reverend Charles Carrol were commissioned by the Congress in Philadelphia to proceed to Montreal, which was under the command of the Americans in 1776, and establish a newspaper. They arrived in April with a printing press, type, paper and their printer, Mesplet, who produced an entreaty to French Canadians to join the cause of the American Revolution. This was fairly unsuccessful as the Lower Canada colonists remembered who had incited some of the native tribes to attack French Canadians. Franklin returned to Philadelphia in May and Mesplet moved his press to the Chateau de Ramezay. Although the first issue was almost entirely in French, Mesplet interjected bilingual commentary and by 1788, the paper was entirely bilingual, owing largely to the population in Montreal by that time. The following commentary by Mesplet in one of his earlier newspapers is a sarcastic report on the many governmental restrictions of the day on newspapers:
"There will not be printed in the paper a single paragraph tending to procure public instruction. Nor any reflection on the conduct of persons proposed by the government for the administration of justice, nor their judgments even though they should be known and proved to be against the laws, because this is none of our business, and you should submit, and consider their judgments with the eye of faith. Nor any work which would tend to destroy, or even to cast the least doubt upon their infallibility. Nor any writing in which it appears that we seek to diminish the civil despotism which they attribute to themselves: you should respect it. Nothing finally which could oblige individuals to keep within the limits of duty, of power and of honesty."

Upper Canada or what is mostly Ontario now, had a similar publishing history. Louis Roy, whose native language was also French, published the first newspaper, *the Upper Canada gazette or American oracle*, in Niagara in 1793. He moved his paper later to the rival city of the time, York, now known as Toronto. This newspaper, unlike the *Gazette de Montreal*, was fairly pro-government but it also eventually ran afoul of the law at the time when certain phrases were deemed to be libellous and the offending writers were fined or thrown into jail. By 1824, William Lyon Mackenzie had started his career as editor of the *Advocate* and he took on an immediate rivalry with the *Gazette* by accusing its editor, who was also the King's printer and a member of parliament, of conflict of interest that prompted a counter attack from the *Gazette* accusing Mackenzie of being a rebel. Mackenzie did not consider himself to be a journalist and his first effort had been a protest against a move to make the first provincial university sectarian which offended his democratic sensibilities.

Similarly, in the development of the Western provinces, the press was established by people with previous experience on British and Eastern Canadian newspapers such as William Buckingham who had been a shorthand writer on the Toronto *Globe* and founded the *Erie news* in Simcoe, Ontario and transported the press, the type, the printing paper and the ink on three ox-carts from St. Paul, Minnesota to Fort Garry to establish the *Nor'Wester* on December 28, 1859. The oxen broke away several times during the journey and the press paper arrived as a solid block of frozen reams of paper. In ensuing years, the press gained a reputation for good journalism and had correspondents such as Thomas D'Arcy McGee in Quebec, George Sheppard in Toronto and F.W. Chesson, Secretary of the Aborigines' Protection Society of England, contributing regular articles.

Saskatchewan's and Alberta's newspaper industry had the same kind of beginnings. Oxen also carted the *Bulletin* Edmonton from Winnipeg to Edmonton, although across flat prairie lands as opposed to the Red River valley. David Laird, the first Lieutenant Governor of the North-West

Territories, which at the turn of the century comprised Alberta, Assiniboia and Saskatchewan, established the Saskatchewan *herald* in Battleford.

In British Columbia, the earliest press was established to report news from the mining camps of the Cariboo in the *Sentinel*. However the first newspaper in British Columbia appeared in Victoria

in 1858 and lasted two issues. It was called *Le Courrier de la Nouvelle Calédonie* and was a French-language newspaper set up by a Catholic bishop to bring religion to the gold-mine areas. Four other short-lived newspapers followed its quick demise until Amor de Cosmos established the *British colonist*. Amor de Cosmos, whose real name was William Smith, was a Nova Scotian journalist and a strong advocate for responsible government. He changed his name, meaning "lover of the world", by an act of the California legislature. What he did not achieve in attacks on the government of the day and on one of its agencies, the Hudson's Bay Company, he later achieved as Premier of the Province.

This extremely brief look at Canadian newspaper printing history illustrates some common traits of newspaper editors: they were appointed to their positions either by government commissions or against them; they had previous experience as printers of pamphlets; they incurred the wrath of the authorities of the day; their initial ventures in the publishing industry were short lived although their later ventures endured long runs. As illustrated, newspaper publishing was a controversial business.

A more complete history of Canadian newspaper publishing may be found in the material cited at the end of this paper and in two other sources: a web page available in English and in French, entitled: *Impressions: 250 years of printing in the lives of Canadians / Impression : 250 ans d'imprimerie dans la vie des canadiennes* at http://www.nlc-bnc.ca/2/10/index-e.html / http://www.nlc-bnc.ca/2/10/index-e.html and a review of that exhibit which appeared in the *National Library News* June 1999, Volume 31, no. 6 (now the *Bulletin*) at : http://www.nlc-bnc.ca/nl-news/1999/june99e/3106-11e.htm (in French at: http://www.nlc-bnc.ca/nl-news/1999/june99f/3106-51f.htm).

The National Library of Canada is a young institution created on January 1, 1953 by an Act in Parliament; however, the newspaper collection was not established until 1967 when the bound newspapers (approximately 18,000 volumes) from the Public Archives of Canada (now the National Archives of Canada) and the Library of Parliament were transferred to a new building. Prior to that time, there was no space for collections of bound papers. The National Library of Canada (NLC) also started to subscribe to morning editions of ten daily cross-Canada newspapers. In 1971, the NLC participated with the Canadian Library Association in microfilming a number of historical Canadian newspapers from each province and territory but it was not until a meeting in 1985, with representatives from each province and territory, that the National Library of Canada reaffirmed a collection policy based on a co-operative decentralized program that was announced as early as 1979. The program was based on several premises: that many of the provinces had large existing print collections, two (Quebec and Newfoundland) of which were based on comprehensive historical legal deposit mechanisms for print newspapers; that some of the provinces had already published union lists of their collections; that some of the provinces had microfilming programs to preserve their collections and that the resources required for acquiring, organizing, preserving and offering service to a centralized newspaper collection would not be forthcoming as opposed to those which could be obtained at a decentralized level.

The responsibilities were to be, on the national level, 1) planning, co-ordination and publicity of the program through the office of the Associate National Librarian where an Assistant Librarian would assume coordination; 2) promulgation of preservation and bibliographic standards ; 3) provision of limited funding to assist in developing master plans for newspaper collections; 4) provision of national and international lending, location and reference services; 5) acquisition and maintenance of all native and ethnic newspapers as well as a special collection of first, last and historical supplements of Canadian newspapers ; 6) acquisition of a positive service copy of each newspaper microfilmed by the provincial projects as funds permit ; 7) creation and updating of a union list of Canadian newspapers and a register of microform masters . In addition, the National Library of Canada would also be involved in developing guidelines for preserving print newspapers and microfilming as part of its preservation program . The provinces assumed responsibility for two main aspects of the program: bibliographic control and planning. Bibliographic control was to include the "identification and description of all newspapers published in the province, past and present" and planning was to include description "in some detail [of] the mechanisms for collecting, preserving and making available the province's newspapers." The provinces were to report their holdings in the form of union lists whose content was to form the basis of a union list of Canadian newspaper holdings to be published by the National Library of Canada. As each province and territory had established a unique approach to the bibliographic control of its serial collections, the provinces were to be responsible for their own development and time frames based on their collections and the types of provincial institutions or library agencies involved.

By May 1989, the coordinator of the Decentralized Program was able to report on a number of achievements at the national and regional levels. On the national level, the *Union list of Canadian newspapers* had been created on-line on the National Library of Canada's on-line bibliographic system, DOBIS, and the first edition was to be published in December 1988 on microfiche. The list included data contributed by all provinces and territories except the Northwest Territories (although the titles from the NWT were included in lists sent by the Boreal Institute for Northern Studies). Upon completion, the reports of the Working Group on Technical Services and the Working Group on Original Issues of Canadian Newspapers were distributed to all coordinators and publicized to the library community through the *National Library News*. The Manitoba Library Association's *Guidelines for indexing newspapers* were also sent to all coordinators. As well, the Decentralized Program for Canadian Newspapers had received wide publicity in the national and international library community in the past three years.

To date, several important developments have been made in addition to those which will be reported in the individual provincial / territorial sections. The Northwest Territories has developed a master plan for the collection and preservation of NWT titles. The Microfilming Technical Committee of the CCCP published its report, *Guidelines for preservation microfilming / Lignes directrices pour la conservation sur microfilm dans les bibliothèques canadiennes* (Ottawa: National Library of Canada, 1993). The *Union list of Canadian newspapers* is now in its third edition (1993) and is available on microfiche as well as on the CD ROM, ROMULUS which also includes the *Union list of serials in the social sciences and humanities,* the *Union list of scientific serials in Canadian libraries,* and the *CISTI serials list*. The National Library of Canada has continued to support the Decentralized Program by purchasing newspapers microfilmed for preservation, including newspapers from Nova Scotia, Newfoundland, Prince Edward Island, Ontario, New Brunswick and the Northwest Territories. The Preservation Office, National Library of Canada, has coordinated the receipt and storage of microform masters for institutions unable to provide adequate facilities or who wish to see first-generation film stored centrally.

The provincial / territorial projects have proceeded well but there are challenges to the program. Many of the initial contacts who single-handedly organized a program for preservation of newspapers in their respective institutions, have moved on to other projects and no one has replaced them. With the exception of New Brunswick and Newfoundland, no other province or territory has published a print list of titles and holdings in the past ten years. Many institutions have discarded their print newspaper collections but have not reported this to a master file. While some institutions reported indexing activities undertaken by various libraries and genealogical societies, this information has not been gathered comprehensively since 1985. It is of particular importance when institutions are making collecting decisions as the abstracting of items such as birth, marriage and death notices from all editions of a paper will ensure that at least this most-often requested part of the paper is preserved when the complete print newspaper cannot be. Inadequate or insufficient filming of older titles is also an issue of contention. Given the decentralized and individualized approach to the newspaper preservation and access program, there is also a need for more coordination between provincial/territorial library and archival communities.

The National Library of Canada has collected a number of special types of newspapers over the years. They are issues that would not likely be filmed because of several factors: some contain a large number of coloured illustrations; they were not always part of the general subscription sold to the public; i.e. they were special inserts; and they represented a group who did not have the resources to have their papers microfilmed unless collectively. As technology has improved and archival and library institutions have responded to the need to make this type of material more accessible to researchers, more of these papers have been both filmed and scanned for digital projects to enhance Canadian history websites and multimedia presentations.

Special issues of Canadian Newspapers:
In 1971, along with first and last issues of Canadian newspapers of any kind—dailies, community, aboriginal, student and ethnic, the National Library of Canada decided to collect single issues of special newspapers. What constitutes a "special" newspaper? Until a fairly recent weeding project, this collection sometimes included whatever a staff member had brought back from a recent holiday. A special newspaper is deemed to be any supplement or issue that is not normally located in the newspaper and commemorates a special event. What constitutes a "special event"? This has further been defined as an event that is non-reoccurring and would be of interest to a wide community. For example, a section on an annual festival or the winning of a particular sports event or the death of a city figure would likely not mean that the print issue of a particular newspaper would be retained or acquired; however, an issue commemorating the history of a town that could likely be found on the centennial or the twentieth anniversary of that town or of the newspaper and an issue commemorating a royal visit or the death of a national figure would likely be retained with the special issues. The reason for retention of these special issues in addition to being historical is that these papers represent a colourful photograph on the past. Three types of special issues were also popular at the turn of the century:

Christmas/holiday issues, Carnival issues and souvenir issues:
The Christmas issue usually had a candy-box type of cover of a child or some depiction of a typical Canadian scene from the *Mail and empire's*, Toronto's moustached hunter on snowshoes striding jauntily through a Canadian forest to *Le monde illustré's* 1906 issue with the elderly French-Canadian couple returning from church on a starry evening. Inside the issues would present a series of the required ads, photographs of Canada in winter and summer, often scenes of the Rockies and a series of poems or essays more likely American or British, or, in the case of *Le monde illustré*, French. There were some interesting exceptions including Bliss Carman's *My Maple Leaf* written especially for the 1886 Christmas and New Year's number of the *Montreal star* and *The Rideau Record's* (Smiths Falls) account of Christmas in the Himalayas (*Christmas in the Orient)* by S.N.Singh.
The Carnival issues were designed for a particular purpose—to attract tourists to an annual event. In this sense they were more of tourist brochure and as such, did not often survive the vagaries of newspaper collecting. They tended to be more topically pictorial than the Christmas issues and often were bilingual even though they appeared in a usually unilingual newspaper such as the *Quebec Daily Telegraph.* They were of particular importance to biographers as they often contained photographs of local dignitaries, especially those of the Quebec Winter carnival organizing committee and local buildings. However, the 1894 issue of the *Quebec Daily telegraph* on page 14 also contains an artist's rendition of the elaborate ice sculptures that were typical of carnival activities.
The final category, the souvenir issues, usually represented a particular historical event such as the end of the *Quebec Chronicle's 1920 Canada's Share in War, Victory and Peace* or the *Quebec Daily telegraph's Grosse Isle Monument Commemorative Souvenir* number *issued on the*

occasion of the unveiling, on August 15th, 1909 of the monument erected to the Irish victims of the plague of 1847-1848. One of the more touching pages of the Great War souvenir edition contained photographs of war graves, notably officers', with John McRae's *In Flanders Fields*. The issue also served as an advertisement for the Soldier's Settlement Board of Canada. The *Grosse Isle* issue contains eyewitness reports from the time as well as legislative accounts which have since disappeared from other sources and the accounts of the time by a member of the Postmaster General's office who wrote for the Irish press in Ireland and in Canada.

The labour and alternative press:
General histories in the past often compare Canada to the United States citing the Civil War and stating that Canada is a peaceful nation not prone to protest except legislatively. An examination of labour papers and what is often referred to as the "alternative press" which would include underground, revolutionary and radical press shows that Canada actually has a rich history of fairly violent protest exemplified not in the least by William Lyon Mackenzie in the 1830's and 1840's continuing to the General Strikes in Winnipeg in 1919 up to the modern protests against the war in Vietnam which were housed in newspapers often published in Canada. A number of newspapers such as *John Blunt's Flash,* which published under that name and under *Flash* in the late 1930's and 1940's were, at the very least, conspiracy alerts. Some of headlines found in *Flash* were "Big business affiliates in Nazi grip! ", "Condor Gold Mines Swallowed Millions" and "When Will R.C.M.P. Act In Quebec?"

Some of the predecessors in the 1960s and 1970s were New Brunswick's *The mysterious east* which delighted in attacking the stronghold that the K.C. Irving company held in that province, *The 4th estate* from Halifax, Nova Scotia and *Georgia straight* from Vancouver, British Columbia whose editors have been arrested for counselling to grow marijuana, obscenity, selling newspapers without a licence and, of course, an old favourite, criminal libel. *Amex: the American ex-patriat in Canada* that published from 1969 to 1977, included a travel advisory for Americans concerning the best cities in which to settle. While the underground press does not flourish as widely as it did twenty years ago, it has found new homes in desktop publishing, on the Internet through web pages such as NewsWatch Canada (http://newswatch.cprost.sfu.ca/) and on the street in publications such as *Toronto street news: helping homeless and unemployed*, a newspaper sold by homeless people.

Most labour newspapers were short-lived and tended to centre on a particular event or cause. In the National Library of Canada, most of these have treated as periodicals, which have come on legal deposit since 1965 as official organs of Canadian labour organizations; however, older single issues of what would have been seen as just another newspaper of the time albeit with a particular political bent were treated as newspapers. Some samples of these papers include *Ontario workman* which was published by the Toronto Trades Assembly and the Canadian Labour Union and appeared during the strike of the Toronto typographers for a nine-hour day in 1872; the *Palladium of Labour* which was established March 21, 1883 as the *Labour Union*, the official organ of District Assembly 61, Knights of Labour and was an exponent of land reform; the *People's Voice*, an independent from Winnipeg, Manitoba which published the activities of the railway workers in 1897; *Bond of Brotherhood,* which appeared in 1903 in Calgary, Alberta and was the first labour journal published in the then Northwest Territories and the *Labour Leader* from Sydney, Nova Scotia, 1919, which demanded fair wages for returning soldiers and also demanded better mail and train service in Cape Breton.

It is also difficult to separate the roots of the labour movement in Canada from the roots of some of the early immigrant press in North America. For this reason, the National Library tends to retain or acquire collections of North American immigrant labour papers that were not published in Canada but were important sources of information on migrating North American ethnic groups. An example is the Croatian newspaper, *Zajednicar,* which has been published in Pittsburgh, Pennsylvania since 1906 to represent the interests of Croatian workers in North America. There is also strong evidence of suppression of the anti-fascism in Canada, a cause that the nascent immigrant labour newspapers took up in the 1920's and 1930's. For example; a student who was in Canada on a visa published a newspaper called Il Risveglio Italiano in 1926. It lasted four months until the Department of Immigration, under the urging of the Italian Consul General, suppressed the newspaper and threatened its editor with deportation. The editor avoided this fate with the help of a petition signed by several thousands but he did cease publishing his newspaper.

Ethnic press:
In 1981, the staff of the Newspaper Section, Linda Erwin and Ruth Bogusis, wrote a handout for the Ethnic Press Exhibition entitled: *The ethnic press in Canada : almost 200 years of ethnic journalism*. The following history of the Canadian ethnic press is taken from this handout. Two-hundred and twenty-one years ago, Anthony Henry (Anton Heinrich), a German immigrant and a former editor-printer of Canada's first newspaper, the *Halifax Gazette*, realized a life-long dream by publishing the first ethnic newspaper in Canada, *Die Welt, und Neuschottländische Correspondenz*. It appeared in Halifax, Nova Scotia, in January 1788, only 36 years after the *Halifax Gazette*. No copies of this newspaper are known to exist but there are copies of Henry's first German serial publication, an almanac, *Der Neuschotteländische Calendar* that appeared in December 1787.

It was some time before the appearance of another ethnic newspaper, also German, in Waterloo County, Ontario. The *Canada Museum und Allgemeine Zeitung* began publishing in August 1835 in what is now Kitchener, Ontario, and continued until December 1840. By the 1840s a few other ethnic newspapers had already begun publishing, and more appeared over the next twenty years; notable among them were two newspapers published by African American immigrants to Canada who were fleeing slavery in the United States. The *Voice of the Fugitive* (Windsor, Ontario) appeared from 1851 to about 1853 and the *Provincial Freeman and Weekly Advertiser* (Chatham, Ontario) published from March 1853 to September 1857.

Until an Italian newspaper made its appearance in 1894 and a Jewish paper in 1897, most of the newspapers published in the forty-year interim were by Germans, Icelanders, Swedes and Danes. However, more and more ethnic newspapers began to appear between 1896 and 1905 as more European immigrants answered the call by Sir Clifford Sifton, Laurier's minister of the interior, to open up Western Canada.
The oldest such newspaper is the German *Mennonitische Rundschau*, which was launched in Winnipeg in 1877. Other veterans are the Icelandic *Lögberg Heimskringla* (Winnipeg), the Ukrainian *Kanadiis'kyi Farmer* (Winnipeg), the *Ta Han Kung Pao=Chinese Times* (Vancouver), the German *Der Courier* (Winnipeg), the Jewish *Keneder Adler* (Montreal), the Norwegian *Norröna* (Vancouver), the Ukrainian *Ukrianskyi Holos* (Vancouver), the Jewish *Dos Yiddishe Vort* (Winnipeg), the Chinese *Hsin min kuo pao=The New Republic* (Vancouver), the Jewish *YiddisherJournal* (Toronto), the German *Die Post* (Steinbach), the Finnish *Canadan Uutiset* (Thunder Bay) and the Polis *Czas* (Winnipeg).

There was strong enthusiasm and determination among early pioneers to publish newspapers in their native languages. Presses were brought in by oxen or carried in by hand, and, where presses were not available, newspapers were painstakingly copied by hand. Both world wars were responsible for new immigrants and both post-war periods were marked by increased ethnic publishing activity. During the wars, governmental pressure was inevitably exerted on the Japanese, the German, the Italians and on some Eastern European ethnic press in Canada. These papers were either suppressed for a time, or forced to publish bilingually (native language and English).

The 1950s and early 1960s saw a steady growth in ethnic publishing. More and more groups who had not published newspapers before were making the attempt. Some efforts were successful; others were not. Beginning in the late 1960s and continuing through the 1970s, there has been a dramatic increase in the number of newspapers (and periodicals) published by ethnic groups. Despite the high mortality rate among the ethnic press, there are today over 200 ethnic newspapers in Canada published by more than 40 different ethnic groups. Some groups such as the Latvians only publish one newspaper, while others such as the Germans have at least ten. In addition to newspapers, Canada's ethnic groups also publish more than 150 periodicals.

Today the ethnic press is no longer represented by only the printed word; it now encompasses all facets of modern media, including radio, television and the Internet. Over the years many editors and publishers have come together and formed ethnic press clubs and associations, both provincial and national in scope. They have tried to become influential forces in Canadian life and have endeavoured to make their voices heard in Canadian government circles on behalf of the "third element" of the Canadian population.

Because of the devastating reductions to non-Canadiana budgets in the past and the increasing cost of print and film subscriptions (with reports of 200% increases in subscription costs for some of the 11 foreign newspapers subscriptions), the National Library of Canada encourages reference staff and researchers to check the ethnic newspapers for world-wide news which can no longer be found on the "day's news only without a fee" Internet sites. Many of our researchers who work in languages other than English and French appreciate the ethnic newspapers as they are able to read about the news in their ancestral country of origin and observe the political developments according to the particular bias of the ethnic group producing the paper.
The Vietnam and Somalian refugee movements have meant an influx of new immigrant groups who have also contributed richly to the heritage of Canadian communities through their presses.

Student press:
The Canadian University Press send their issues to the National Library a year after receipt from the publishers. Student newspapers tend to get away with more than most papers although, as mentioned with the *Georgia strait* previously, they have also been subject to libel suits mainly from their own constituents. In the history of student newspaper journalism, some of the most vitreous articles were reserved for in fighting among the staff. Nevertheless, Canadian student newspapers were launching pads for many illustrative careers including those of the comedians, Johnny Wayne and Frank Shuster (*Varsity*, University of Toronto), writers Louis Dudek (*McGill Daily*, Montreal), actors, Eugene Levy and Dave Thomas (*The Silhouette*, McMaster University, Hamilton, Ontario), and Canada's National Librarian, Roch Carrier (*Le Bouclier*, Université Saint-Louis, Edmundston, Nouveau-Brunswick).

Community press:
It is difficult to describe comprehensively Canadian community newspapers, especially when over 3000 exist, but one unifying factor is that many communities named their papers in a way that
reflected an aspect of the paper; for example, the political bias; e.g. The confederate or the name of the founder; e.g. Ross' weekly or an aspect of the community-- a landmark e.g. the Southampton beacon; or a common activity in the district at the time; Le trappeur Winnipeg; or a humorous play on the name of the paper and the town; e.g. the Ayr gun. This unifying factor allows a number of cross-Canada weeklies to be presented in a way that reflects a wide variety of Canadian communities in an interesting fashion. Some other samples are from Alberta: The Olds Moose-paper; the Stavely Honeydripper and the Swan Hills Grizzley ; from British Columbia : the Ganges Gulf Islands driftwood; the Kitimat Ingot and Vancouver's The Linear magpie and The Ozonagram ; from Manitoba, St. Boniface's Le Métis and from Winnipeg, Siftings ; from New Brunswick 's Grand Falls, the Cataract and from Saint John, The Penny dip ; from Newfoundland, Harbour Breton's The foghorn; and St. John's Confederate , whose rival, The Independent hotly contested the right to the island in 1949; from the North West Territories and Nunavut; the Arctic Howl from Baker Lake and from Pine Point, the Pine pointer. Nova Scotia had, from Antigonish, The Casket and from Halifax the Owl. Ontario, the province with the largest number of community newspapers had the Falcon flyer, from Falconbridge, Charivari from Hamilton; A Usually Reliable Source from the capital, Ottawa, the Southampton beacon aptly named for the lighthouse on Chantry Island and on the north side of this town and from

Toronto, the Porcupine which pricked its readers in 1835. From the smallest of the provinces came the Charlottetown Phenix and from Québec came original titles such as Montréal 's Le loup garou and Le vrai loup- garou and Polichinelle . One of the more interesting titles was Tenaga Quebec's The Low down to Hull and back new. The prairie province of Saskatchewan had Battleford 's Little joker and Moose Jaw's Our way of life and finally, the Yukon 's Dawson City, home of the gold rush published the Clondyke news.

Community newspapers continue to be an unplumbed source of local history and remain popular among researchers for their genealogical value. Many towns in Canada have been persuaded to microfilm their newspapers when the local Rotarian or head of another town organization discovers that their name was in frequent print as the paper published the only account of the local council meetings or a history of a town founder who happens to be their ancestor.

Aboriginal newspapers:
It is likely that the aboriginal press remains one of the untapped resources in Canada for studies in aboriginal political issues. In 1974, the Native Communications Program was developed by the federal government to fund Canada's aboriginal press. The program was cancelled in 1990 and this dealt a severe blow to the publishers. Two large newspapers, *Kainai news* from Alberta and *Micmac news* from Nova Scotia died as a result after attempts to regain funding through increased advertising. In both cases, the papers had been publishing for a predominantly rural audience where unemployment figures reached over 85% in some communities. In Labrador, the paper published in Inuktitut and English, *Kinatuinamot Ilengajuk,* became English only to allow for more ad space and also changed its frequency from monthly to quarterly and it ceased publication in 1993.

The aboriginal press has recovered somewhat with the advent of electronic news but the loss of the print word is illustrated by the now defunct Suvaguq from Pond Inlet / Mittimatalik, Nunavut. The newspaper was done on coloured paper with handwritten script because of the Inuktituk symbols. In 1991, the Northwest Territories Archives filmed all extant issues and the National Library of Canada retains the print issues as well. The editorial comment on page one "No News is Good News" is quite interesting as it states basically that there was no news, as no one was around to make or even read the news. They were all out on the sea ice or at campsites or waiting to go there. Some of the content included an article on television, radio and mail in the North and the need for local communications. There was also a note on a blood test for Vitamin C levels and a note from the Nursing Station on proper meal preparation. The paper ended with a request for information and samples from narwhal caught at the floe edges and one obituary notice that was hand-written and illustrated with a drawing of a cross.

Although a good variety of aboriginal newspapers exist for many communities across Canada, they tend to have a short life and are difficult to acquire, as they are often not advertised widely in trade publications. The National Library is pursuing ways of better acquisition of aboriginal newspapers and periodicals; however, it is interesting to note where gaps occur. A search for an issue of an aboriginal newspaper in Quebec that covered the Oka incident, where the period between March 11 and September 26, 1990 was marked by the confrontation between Mohawk Indians, the Quebec Provincial Police, and the Canadian Armed Forces near Oka, was unsuccessful either in English or in French although the coverage by aboriginal communities on the Internet was extensive.

The National Library of Canada has encouraged access to these print newspapers and their surrogates on microfilm through use of the National Library's catalogue, ResAnet and through Access Amicus that provides bibliographic holdings and locations information for over 200 million records from over 500 libraries. There are also two sources available at the National Library of Canada's site at www.nlc-bnc.ca which are of interest to the research community: the *Canadian newspapers on microform held by the National Library of Canada / Les journaux canadiens sur microforms disponibles à la Bibliothèque nationale du Canada* which gives a brief title and holdings for all of the newspapers acquired on microform and the *Checklist of Indexes to Canadian newspapers held by the National Library of Canada / La liste de contrôle de journaux canadiens conservés à la Bibliothèque nationale du Canada,* which lists print, online and CD-ROM indexes which have been received on legal deposit. Information at this site is available by searching by province, by title of the index and by the title of the newspaper. Both of these sources are updated regularly.

The National Library's decision to preserve a part of the past by retaining a large number of print newspapers was partly based on its role as conserver of the printed word in Canada and partly as the NLC is one of the few national libraries which has never had a preservation microfilming program. A limited program has been revitalized and a number of titles have been identified for preservation microfilming; mostly newspapers, which would not otherwise be preserved commercially or by provincial/territorial filming programs.

The types of newspapers that the National Library has been adding to its print collection are indicative of the richness of newspaper publishing in Canada. While commercial enterprises have largely been responsible for most of the preservation microfilming of newspapers, some provincial institutions such as Quebec, Newfoundland, Saskatchewan, New Brunswick, the North West Territories (including Nunavut) and Alberta have ongoing newspaper preservation microfilming programs for community newspapers and Ontario, Manitoba, the Yukon Territories, Nova Scotia, Prince Edward Island and British Columbia have had filmed older papers but do not have ongoing current microfilming programs. While the consensus is that digitization will allow a larger public to have access to the contents of more newspapers, the library and archival communities do not see digitization as a preservation tool. Digital storage or digitization then microfilming from the digital source has been viewed to date as a means of preserving some information in newspapers. Any digitization program on a national level must serve the dual purpose of being accessible and archival. In order to do both, the institution must adopt standards and best practices in its microfilming and digitization program or in what it develops through partners or contracts for these programs and create and capture the information required to identify the information that defines the print source. All of the above-listed categories contain candidates for digitization; however, none of the digitization projects to date could replace the original article. Perhaps the solution to the conundrum of preservation of newspapers is a combination of print, microform and digitization methods that will best suit the needs of present and future researchers.

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Burrows, Sandra. The Decentralized Plan for Canadian Newspapers: 1983 to 1994 and Beyond. Co-published simultaneously in ***The Serials Librarian***. Vol. 26. No. ¾. 1995. pp.55-83 and **Serials Canada: Aspects of Serials Work in Canadian Libraries**. Edited by Wayne Jones. N.Y. The Haworth Press, Inc. 1995. pp. 55-83. Endnotes Notes, 4 and 5 as follows: McKeen, Liz. **Decentralized program for Canadian newspapers - report** 1988-11-18 to H. Clement, M.Scott and Senior Staff minutes **Appendix C: Recommendations of the Resource Network Committee to the National Library Advisory Board** arising form the meeting of March 17-18, 1983 Annex A.: Senior staff meeting April 7, 1983.
Canada's Printing Pioneers. ***Provincial's Paper***. Vol. 31. No. 2. 1966 18 p.
Demay, Joël. The persistence and creativity of Canadian aboriginal newspapers. ***Canadian Journal of Communications***, Vol. 18, No. 1, 1993
Elliott, Robbins L. The Canadian labour press from 1867: a chronological annotated directory. ***Canadian Journal of Economics and Political Science***. Vol. 14. May 1948. pp. 220-227.

While few publications exist that are devoted solely to the labour press in Canada, **Radical Rag: the pioneer labour press in Canada** by Ron Verzuh. Ottawa: Steel Rail Publishing, 1988 gives an excellent account of the rise of the labour up to the 1920s.

The Ethnic Press in Canada: almost 200 years of ethnic journalism. Ottawa : National Library of Canada, June 25, 1980 // **La presse ethnique au Canada : près de deux cents ans de journalisme ethnique**. Ottawa : Bibliothèque nationale du Canada, le 25 juin 1980.
Flash. Toronto, ON [1938- 194?//] Vol. 3. No. 16. Saturday, September 21, 1940. pp. 3 and 10.
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The Children's Library : a gift of love from the community

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Introduction

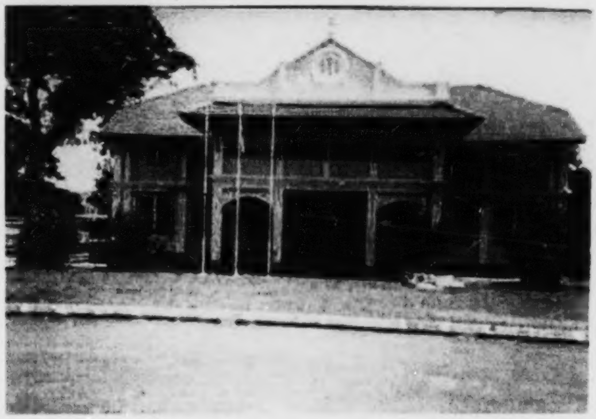
Malaysia's '2020 Vision' is that of a nation that is fully developed in all dimensions : economically, politically, socially, spiritually, psychologically and culturally. Through this 'vision' we aspire to become a scientific and progressive society that is innovative and able to contribute to the scientific and technical civilization of the future. (Sunday Star, June 2, 1991)

Penang has a goal of being recognized as a fully developed state by the year 2020. In this aspect the Penang Public Library Corporation conceptualizes its own mission, vision and strategic plan in line with the state's vision and development plan.

The Penang public library scenario is one of which rapid development has taken place after the 1990's. At present the Corporation has expanded tremendously with its central library in Seberang Jaya, Prai, with branches in 5 districts namely Georgetown, Balik Pulau, Bagan Ajam, Bukit Mertajam and Jawi. The Corporation also has its own Children's Library at Scotland Road together with 10 mobile libraries and 43 village libraries serving 2 million people on the island of Penang and the mainland.

The Penang Public Library has always played an important role in promoting literacy, disseminating information and knowledge, as a social institution and a center for information to its community and society. As a recreational, educational and cultural center the Penang Public Library with its network of libraries all over Penang has been the main means for information distribution especially for school children and the public as a whole. Due to its function and role, the public library has undergone various changes from operating and servicing through the traditional means to a center of information and research with the latest information technology and the availability of various databases not mentioning its own database. The main library in Seberang Jaya is fully automated and is now in stages in implementing a network of borderless libraries to link all its branches, village and mobile libraries within Penang and also to other libraries and information services through its electronic Library network.

Penang Childrens' Library



Role of the community

The UNESCO Manifesto stresses creating and strengthening the reading habit in children from an early age and emphasizes the task that the public library must promote literacy in both the traditional and the modern sense by supporting, initiating and participating in literacy programmes and activities for all age-groups. The task of encouraging positive reading interest to foster a love for reading which will promote reading culture and society is not the responsibility of the state library alone but a concerted effort of all parties .

We must realize that raising funds for the Penang Public Library, a semi governmental body, is tougher when compared to raising funds for non governmental organization especially Non Governmental Bodies that touch the people's hearts for example the Orphanage, Spastic Children and Abused Children. The Penang Public Library being a semi-governmental body that operates from a grant given by the government gives the public a general perception that the Government is solely responsible for providing these services. So how did we change the attitude of the people/community?

The library can play a role to reach the heart of the community. Getting the community to know the importance of providing library services to the children and the objectives of the Children's Library put across to the community that they too are socially responsible for the existence of a library for the children. If the community believes in the cause for the Children's Library then they will have the vision to provide the assistance required. The community must be made to realise that it is essential that a good supply of excellent and appropriate books be made available for a child's educational and cultural development.

Fundraising is more than just getting funds. It requires a broad and deep commitment by the Children's Library Committee to face the public and to make our objectives and presence felt. These are strong comments because one of the most primary motivators for donors to give is that people identify with the cause. Quite often people are willing to give for a cause that they believe in. This is also expressed in terms of the concern of donor for the cause that the organization stands for. One of the rules of fund raising is be passionate as fund raising is a warm-hearted affair. People seldom give for rational reasons, they give because their hearts tell them to. A fundraiser therefore has to be committed to the cause he or she is representing. Our message has to be bought over with passion. It was this passion that drove the wives of the Penang's Chief Minister and Deputy Chief Minister together with all the State Executive Counselors' wives to work with the community and the state government in establishing the PENANG CHILDREN'S LIBRARY.

Background

Research has proved that children who are introduced to books in their preschool years have a considerable advantage over those who were not. Educationalists generally recognize that children learn more in their first five years than lives they will learn at any other time in their being aware that reading and Library usage are key factors in a child's intellectual development. Children who read are more likely to be successful in school and later in life and getting an early start by having stories read or told to them is vital in this process.

In a survey on literacy conducted in Penang in 1997, it was discovered that only 37% of the respondents were members of a library outside of school. Due to this alarming percentage rate of children being members of a library the urgent need to set up an independent Children's Library as opposed to a children's corner in an adult library was spearheaded by the Penang Chief Minister's wife and his Deputy's wife. The main aim of establishing the Children's Library is to provide a center mainly for children between the ages of 3 to 15 years so as to inculcate and nurture reading and life long learning habits among them. The Children's Library's role is also to organize programs and activities to inculcate reading, stimulate learning and promote awareness of library skills.

UNESCO in 1961 published a document written by Andre Maurois which stresses very clearly children's need for Library services. Sissel Nilsen in her paper 'The UNESCO Public Library Manifesto : an investment for the future' in the regional Conference on Public Libraries in 1997 in Kuala Lumpur quoted a short passage from the above mentioned document :
"It is in early life that a taste for books and the habits for using libraries and their resources are mostly easily acquired. A Public Library must have a children's corner. Most children have not enough money to buy books, nor have their parents enough money to give them books. Only in a library will they find good books, which will save them from reading mediocre or dangerous ones…to an intelligent child, shelves full of books among which he is free to browse open a veritable paradise.'

Out of the 12 key missions in the UNESCO Public Library Manifesto (1994) five of these form the basis of the objectives of the Penang Children's Library :-

- 1.Creating and strengthening the reading habit in children from an early age.

- 4.Stimulating the imagination and creativity of children and young people.

- 5.Promoting awareness of the cultural heritage and appreciation of the arts, scientific, achievements and innovation.

- 11.Facilitating the development of information and computer skills and

- 12.Supporting and participating in literacy activities and programmes for all age groups, and initiating such activities if necessary.

It is encouraging to note that the UNESCO Public Library Manifesto of 1949, 1972 and 1994 editions strengthened the vision and mission of these ladies later appointed by Penang State Executive Council as the Penang Children's Library Committee in 1991. Reading ability is fundamental, and it is important that public libraries encourage parents to use books and read aloud for their children from an early age, talk with them and tell tales from their own culture (Sissel Nilsen, 1997).

It was with this mission in mind that the Penang Children's Library Committee embarked on a state wide campaign to raise funds from the corporate sector to set up a public library solely for children. 22nd May 1991 saw the establishment of the Penang Children's Library Committee with the Chief Minister's wife as the Patron and the Deputy Chief Minister's wife as the Chairman of the Committee. Members of the committee comprised of wives of the state executive council, the wife of a chairman of the corporate sector, and the chairman of the wives of the government staff organization (PUSPANITA), a lawyer, an architect, a librarian from the University Library, a chief executive officer from the Industrial sector, with the Penang Public Library Corporation as the secretariat. The composition of the Children's Library Committee was drawn from both the public and the private sectors with the aim of not only setting up the Children' Library but able to solicit volunteers and raise funds for the establishment of the Library. It was decided that the State Government provided an initial start-up grant and the Children's Library Committee was to raise funds for the equipment, collection and maintenance of the Library. The state government also provided a building for the library and suggested that the management of the library be run by volunteers from the community.

Creative Strategies For Fundraising

As have been mentioned earlier that fundraising for a government body is not an easy task especially when the public feels that it is the sole responsibility of the government to provide library services. Fundraising is a serious business. It requires commitments, dedication, sincerity, hard work and personal sacrifice from the Committee. The Committee was successful in raising funds through these strategies :-

- **Direct mail fundraising** involves the Committee to identify donors and follows up by sending direct mails to these donors at their home and business addresses. Through direct mail the Committee recognizes three target groups namely :
  - Commerce and industry ,
  - Trust and Foundations and
  - Private individuals

In direct mail fundraising the objective is to approach the donors and let them know what is the Committee doing. The contents of the direct mail include the following :-

i) Information for the donors

ii) What to do with the money

iii) Make the donor know and understand the benefits i.e. income tax exemption, condition and policy.

iv) Thanking the donor

v) Authorized signatures – influential personality (in this case the patron of the Children's Library Committee is the chief minister's wife)

Fundraising through direct mail is one of the fastest growing areas of income generation and is long term. It was also discovered that 80% of the fundraising income for NGOs are the private individuals.

The committee was very fortunate as both the patron and the chairman are influential personalities. Due to the standing of the committee members in the public and private sectors, the committee did well with this direct mail fundraising. They were able to raise a substantial amount in kind and in cash and were successful in getting the library opened to the public in July 1993, with an initial collection of 8,000 volumes of books and equipped with multimedia resources.

- **Raising Funds From The Corporate Sector**

The committee did not stop fundraising activities after the Children's Library was set up. They enlisted a few corporate bodies to sponsor children's activities at the library. Again having members from the corporate sector as committee members paved the way for the committee to identify companies that have an annual budget put aside for social obligations. We must bear in mind that companies do not donate but they invest. As such companies need to know what are their returns, for example if a company sponsors an activity for the library, what does it gain?

Through this strategy the committee needs to identify opportunity analysis which constitutes a planned attempt at listing possible requirements of the corporate on one side and activities or strengths of the charity on the other. The ability to link these to mutual advantage will result in opportunities of cooperation which could be progressed through formally constituted proposals.

In this aspect the committee is able to identify two corporate bodies namely the Penang Butterfly Farm and Read-Rite Malaysia. The Penang Butterfly Farm wants to launch its children's caterpillar club using the children's library members as their inaugural members. As such this company is able to benefit from this cooperation by identifying new clientele group and creating an environment for a project launch.

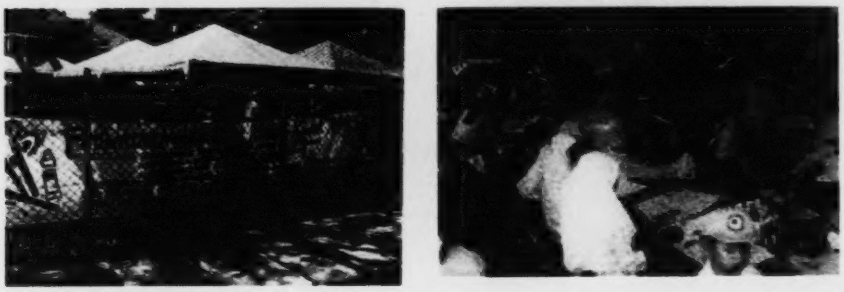
Launching of the Caterpillar Club Sponsored by the Penang Butterfly Farm.

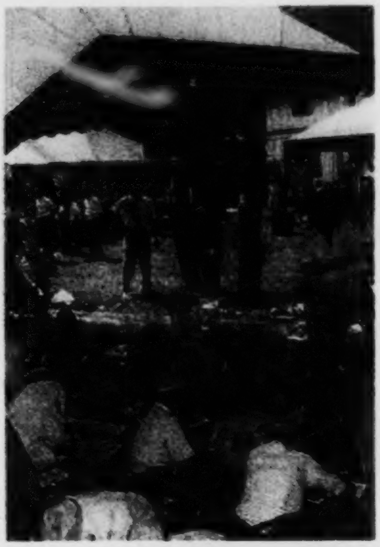
BEST COPY AVAILABLE

THE OFFICIAL MILK FOR CHAMPIONS

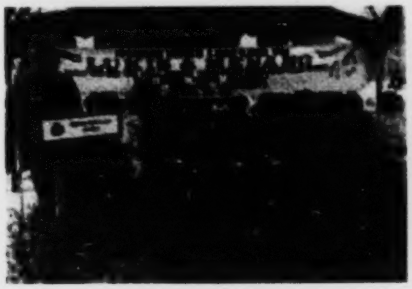
The Read-Rite Malaysia on the other hand sponsored the Art competition for the children's library members and school children from the rural areas. This program which was started in 1995 became an annual affair for three consecutive years and had contributed towards a dual purpose. Firstly this program was fully sponsored by Read-Rite and secondly it had enabled the rural children not only to participate but also visit 'their' library - the Penang Children's Library. At the same time the company was able to enhance its corporate image and carried out its community service.

Children's Art Competition Sponsored by Read-Rite, Malaysia.

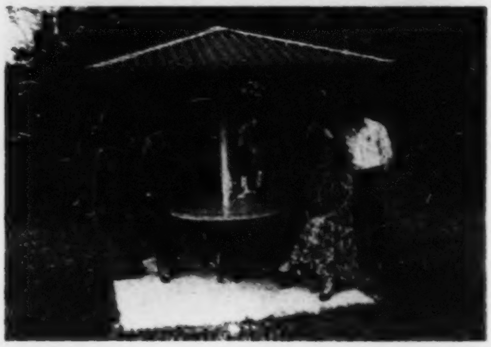




To be able to identify target groups and earmarked companies in Penang which was 'ready' to 'invest' was also one of the steps that the committee took. Again the position of the committee members played a crucial part in securing funds from companies. For instance Sharp-Roxy donated the media equipment for the media section of the Children's Library thus enabling the Library to provide electronic service. The Penang Lions and Lioness Club donated garden sets to the Children's Library to enable them to portray their contribution to the community. This contribution benefited the patrons of the library as they now have a shady place to wait for their parents and also serve as a recreational place.



The Garden Set Donated by the Penang Lions & Lioness Club



One of the objectives of the Children's Library was to have materials in the four main languages giving the national language in priority and providing for the other three languages namely English language, Mandarin and Tamil. Since the Children's Library was situated in a Chinese majority area there was an urgent demand for materials in Mandarin. There was no funding for the Library's collection from the government as it was initially agreed that the Committee was to raise funds for the collection of the Children's Library. As such the committee under the patronage of the Chief Minister's wife approached a few bookshops to donate Mandarin titles and managed to secure a donor and through her zealous effort the Children's Library has been receiving an annual contribution of children Mandarin tittles.

It will not be good enough for the Children's Library to be merely offering only lending and reference services and it certainly will no longer be enough to be a keeper of books. Even at the onset, the committee wanted the Children's Library to be a special resource center for children. Not only will the child expect a relevant kind of library experience in its information seeking and recreational reading behavior but is able to be exposed to programs and activities that can nurture creativity and critical thinking and life long learning habits .

With the shortage of experienced staff, the Children's Library Sub-Committee on Activities had to look into other avenues to ensure that these programs and activities were carried out every weekend. By co-opting teachers of preschools and kindergartens, lecturers from Teachers Training Colleges and the nearby University as members of the Library Sub-Committee on Activities, there was always a continuous flow of volunteers to conduct activities in the Children's Library. Story telling sessions and craft activities were conducted by the preschool and kindergarten teachers. The students from the Teachers Training Colleges also conducted story telling sessions and English creative writing skills programs. This had enabled the Children Library to provide an increasing number of services to foster language development in young children. The children were also exposed to educational video filming and editing techniques by the University students. Again here the Committee worked out a win-win situation whereby in the case of the preschool and kindergarten teachers there were allowed to use the Children's Library's reference materials as teaching aids in their own environment; the lecturers from the Teachers Training Colleges had a resource center (in terms of place and children) to train their trainee and English language training programs. These arrangement was made in order to strengthen and foster good relationship between the volunteers and also to sustain these activities.

From time to time the public awareness regarding the need for volunteers to run activities is very gratifying. The Penang Butterfly Farm carried out story telling sessions coupled with life display of caterpillars and butterflies species. The Japanese women association also volunteered origami sessions weekly. These programs are used to stimulate interest to reading to children and the early teenagers, encourage library membership and lead to regular participation at story time sessions.

Puspanita helping out in the Workshop of the traditional game of "congkak"

University Students Helping Out in the Video Filming & Editing Techniques Activity

Origami activities with the Japanese Women Association

The Rotary club in Penang in 1997 embarked on an educational project targeted primarily at encouraging parents and their younger children to discover the world of books and to gain knowledge from reading them. The campaign which emphasized the value of reading aloud to children even before they begin to read worked very well with the children's Library. The cooperation was a mutually beneficial 'transaction'. It was not as if it was a 'sales transaction' but in the end both parties benefit. The Rotary Clubs of Penang got a product or more or less tangible services like exposure, publicity and good PR and the Children's Library not only benefited from a very good program but received a donation of books to sustain the campaign and again this added valuable materials to the collection.

In promoting awareness of the cultural heritage and tradition, the Children's Library conducts traditional games activities. Workshops and competition are organized with the help of Puspanita (The Association of the Wives of Government Officers).

After identifying the target groups for the fundraising projects it is then necessary for the committee to formulate fundraising proposals based on the following information regarding the identified company. That the company should have:-

i. A disposable income budget earmarked for charity

ii. Charity policy

iii. Past track record of giving to charity

iv. Given usual amounts

v. Projects/programmes preference

vi. Current promotion/sponsorship programmes and commercial aspirations

Apart from these the Committee should also have a personality sketch of vital functionaries of the company.

After acquiring the information relevant to develop the fundraising proposal, the Committee then blended the information inputs with the corporate's requirement and strengths or activities of the charity to concretize the 'Opportunities' list 'Opportunities' which could feature high on the priority of a corporate and also yield maximum funds for the charity should be accorded precedence and developed into suitable proposals for presentation. While developing the proposal the Committee realize in order to succeed, the proposal must be complete in all aspects, albeit, brief and relevant and to highlight the value of the proposal and not the cost of it.

After formulating the proposal, the next step is to infiltrate into the Corporate though the Marketing Director, or the PR/Communication executive to discuss the anatomy of the proposal. The last step is the presentation of the proposal and the best method is face to face fundraising presentation whereby it should be well conceived, not exceed twenty minutes and aided with a very brief video of our charity project.

The strongest point about a face-to-face presentation is that the Fundraiser's personality traits and powers of persuasion can be well projected and suitably supported with body language. Sponsorship or promotions are the most preferred form of charity support by the Corporate Sector in view of its intimate link with the commercial advantage of having tax exemption benefits.

Special Events Fundraising

The Committee is also successful in fundraising through special events. In 1995 the committee organized a charity Premier and managed to secure a corporate firm to sponsor the Charity Premier. Although tickets were sold to individuals the committee wanted the corporate sectors to sponsor seats for the disadvantaged and socially deprived children. The main sponsor, T A Securities again was regarded under fundraising as a 'commercial deal' whereby it was a business-like, mutually beneficial transaction where both parties benefited. The corporate sector benefited through having income tax exemption and enhanced public image, the children library not only got their donation but was able to carry out charity work as well.

Closing Remarks

Commitment from the community is very crucial for sustainability of the Penang Children's library. No doubt the Children's Library was very fortunate to have a very committed, dedicated and hard working committee but it is still the main responsibility of the Penang Public Library Corporation to ensure its success.

Credibility and transparency is of utmost importance. Fundraising is not a one-way act of giving but a process of social exchange between donor and recipient. To continue the relationship, the recipient provides some form of satisfaction to the donor. This may be simple as a thank you letter or as complex as the naming of a building.

The timing of the recipient's response plays an important role in the social exchange. A prompt and timely response is normally expected and is assuring to the donor. Trust is important in this relationship. Recipient must be accountable and be seen to be faithful to their stated purpose. It does not go well if an organisation appeals for funds for one purpose but uses it for another indiscriminately.

Public relation is very important. Always keep in touch with your donors and potential donors. Always go for the same donors and try go get new donors. The simple thing to remember is, ASK,

Lastly, we must always remember the most basic principles of Fundraising. Fundraising is not about money. It is about people, about needs that have to be met. The Penang community spearheaded by the Children's Library Committee took upon themselves the responsibility to set up a Children's Library. Our children are the hope of the future. If we teach our children to love to read, we are handing down a special kind of magic to them – a gift that will enrich their lives as nothing else can do.

THE CHILDREN'S LIBRARY: A GIFT OF LOVE FROM THE COMMUNITY

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The use of Logframe analysis for information-specific development projects

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Background

All development projects in the library and information sector should be viewed as existing within a project management cycle. It is important to recognise from the outset that each stage in the project cycle is part of an integrated process in which the stages build upon one another, and that the stakeholders are involved in every stage.

First, the ***identification stage*** involves the various processes which identify library development projects that meet the funding agency or host institution priorities and sets the broad goal and objectives of the project.

Second, the ***preparatory stages*** help create a more complete understanding of the project design and identify the impacts that are likely to flow from the project. A feasibility study is often one of the preparatory stages.

Third, the ***project design*** provides a full picture of the activities and inputs that will help achieve the project objectives. It includes identification of the indicators through which progress should be measured.

Fourth, the ***implementation stage*** is the process of managing the inputs and activities established in the project design to obtain the desired outputs and achieve the objectives of the project. Monitoring is an important part of implementation and includes monitoring the efficiency with which project inputs are used to achieve the outputs, as well as the effectiveness of project activities.

Fifth, in its ***completion stage*** the project should have achieved its objectives and be set up to provide sustainable benefits. The extent to which objectives have been achieved can be assessed through a project completion report.

Logical Framework Analysis

These steps in the library development project management cycle can be linked together systematically through a logical framework analysis or logframe, which is an analytical tool for planning, design and management of projects. ***It is a systematic way of identifying the elements of a development project and the links between them to provide an objective analysis of the project design.*** This systematic approach ensures that links and feedback between different stages are incorporated into the project management cycle. The logframe also keeps the primary purpose of projects uppermost: the sustainability of project achievements for the intended beneficiaries.

Uses of the Logframe Methodology

- to identify development projects that meet funding agency and development recipient needs and priorities
- to design projects in a systematic and logical way, identifying risks and constraints
- to implement projects through effective and efficient use of resources, and managing risks identified in the project design
- to monitor progress by identifying indicators that are critical – these may be institutional, economic, social
- to promote participation by all stakeholders in planning, design and implementation of projects

The result of the analytical logframe process is a matrix (see Figure 1) that is useful for setting out the design elements of a project. The logframe is not a static document but should be reviewed and revised in light of experience during project implementation.

Figure 1. The Logframe Matrix

Summary	Indicators	Means of Verification	Risks and Constraints	Risk Management
Goal: the broader goal to which the project contributes	measures of achievement of the goal	sources of information methods used	matters that affect the goal-objective links, including those outside the project's control	specific strategies both within and outside the the project's control
Objectives: the primary purposes of the project, and especially a base for ongoing benefits	the conditions at the project's conclusion showing that the objectives have been achieved	sources of information methods used	matters that affect the objective-output links	project-specific activities that help address the risks and constraints
Outputs: direct and measurable results of the project that help achieve objectives	value and quality of the outputs	sources of information methods used	matters that affect the output-activity links	project-specific activities that help address the risks and constraints
Activities: actions undertaken and resources needed for project implementation	implementation targets	sources of information monitoring methods used	matters affecting the successful completion of project activities	should be addressed by other activities or by way activities are undertaken

Formulating the Logframe

The formulation of a logframe involves systematic analysis of the different components of the development project. It consists of four inter-related steps.

- The ***first step*** is identification of a goal based on the reasons for the project. The goal may not necessarily be reached until well after the project has been implemented. The project should contribute to the achievement of the goal but in fact may not be sufficient to achieve this on its own merit. Remember that the more specific the goal within the information setting, the better the chances of achieving it.

- The ***second step*** is formulation of the desired objectives in consultation with all stakeholders. The objectives are a more precise and immediate statement of what the project is expected to achieve at completion. The number of objectives should be very limited – perhaps only three or four. Remember that the smaller the number of objectives, the better the chances of achieving them.

- The ***third step*** is determination of the outputs which describe the expected results of the project which would help to achieve its objectives.

- The ***fourth step*** is the description of project activities, which are the actions to be carried out (and the resources required) to implement the project.

Format of the Logframe

The result of the logframe analysis is normally presented as a matrix of four rows and five columns which provides a summary of the project design (Figure 1). This summary describes the project components, outlines how the project may be monitored, describes the risks and constraints, and suggests how these are to be managed through a process of vertical and horizontal logic.

- ***Column 1 (Summary)*** - records the hierarchy of goal, objectives, outputs, and activities – the why, what and how of the development project.

- ***Column 2 ((Indicators)*** - states what indicators can be used to measure the achievement of the goal, objectives, outputs, and activities.

- ***Column 3 (Means of Verification)*** - states how these are to be measured.

- ***Column 4 (Risks and Constraints)*** - identifies the risks and constraints under which the project will be operating.

- ***Column 5 (Risk Management)*** - describes how these risks and constraints will be managed or taken into account in the design of the project.

Vertical structure

The vertical structure of the logframe methodology is based on cause and effect - if the means are provided, then the ends will be achieved. Each level provides the rationale for the next level down: the goal helps to define the objectives, and the objectives define the outputs, etc. The successful completion of each level of the hierarchy is a prerequisite for achieving the next higher level. Thus project inputs and activities produce outputs; these outputs are expected to achieve the project objectives; achieving the project objectives contributes to the attainment of the goal (see Figure 2 below).

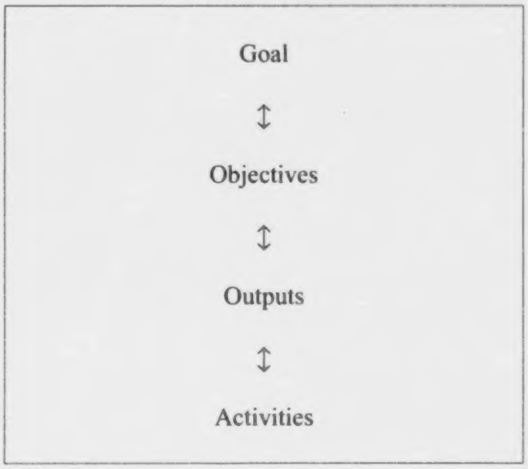
Three conditions are important in the vertical logic structure.

- First, achieving the objectives is necessary but not sufficient for attaining the goal. This is because the project is probably just one of a number of projects or initiatives that contribute to a programme, sector or national level goal – remember that projects never exist in isolation.

- Second, producing the project outputs is necessary but may not be sufficient for achieving the objectives – remember that outputs alone are inadequate.

- Third, carrying out project activities is necessary and sufficient to produce the required outputs – remember that carrying out the activities allows achievement of objectives through outputs embedded in activities.

Figure 2. Vertical Structure of the Logframe



Horizontal structure

The horizontal structure (see Figure 3 below) begins with a description of different hierarchical levels of the project: the goal, objectives, outputs and activities. The next two columns establish the basis for monitoring and evaluation and indicate how the achievement of the results at the different levels is to be measured.

Figure 3. Horizontal Structure of the Logframe

Goal Indicators → Means of verification → Risks and constraints → Risk management

↕

Objectives Indicators → Means of verification → Risks and constraints → Risk management

↕

Outputs Indicators → Means of verification → Risks and constraints → Risk management

↕

Activities Indicators → Means of verification → Risks and constraints → Risk management

What Indicators Should Be

- a measure of results, impacts or activities that are important to achieving the project objectives
- a plausible measure of what the project is trying to achieve
- sufficient to give an indication of success or failure
- independent of other factors so that only one particular set of measurements is required for each indicator
- verifiable as part of the project
- precisely defined in terms of nature, quality, quantity and timing

The selection of indicators can assist in the design of a project. Where it is difficult to find an indicator for an objective, the reason could be the definition of the objective statement. This should lead to a re-examination of the objective and possibly a re-statement to something that can be reflected by an indicator— that is, a measurable outcome.

The process of relating indicators to objective statements helps to modify the project design and makes it more realistic and achievable. Indicators of a general nature tend to broaden the scope of the project, while specific indicators tend to restrict it – usually the more restricted or limited, the better.

The third column, the means of verification, records the sources of information, and the methods of data collection and analysis used to check on the indicators. These include national or sectoral statistics for the goal, project data and surveys, etc. for the objectives, and project data (including on-going monitoring) for the outputs and activities.

The fourth column, the risks and constraints, identifies factors that directly affect the vertical logic of the analysis. The 'if-then' links of vertical logic only function if the important assumptions and constraints are identified, made explicit and managed. This column is critical to the successful implementation of the project design as it identifies:

- how other factors (e.g. political or cultural), beyond the control of the project might affect it
- the risks in the project environment which would undermine the success of the project unless properly managed
- the potential social and environmental impacts of the project activities that should be managed by the project design.

This column therefore expands the 'if-then' vertical structure of the logframe analysis to a series of hypotheses that state 'if, and assuming that, then…'. This helps to make explicit the logical structure of the planned project.

The final column, risk management, describes how the manageable risks and constraints will be dealt with in the design of the project. External risks and constraints should also be identified in the logframe during the analytical process, and their importance determined. Indeed, throughout this process risk management should be a key consideration, with risks considered at every stage (see Figure 4 below).

The risk management column should indicate those activities outside the scope of the project that will deal with the risks that are deemed most important. If these risks and constraints are likely to pose a major threat to the success of the project and are unlikely to be managed by external factors, then a re-examination of the project rationale may be necessary. At the activity level, the risks and constraints that are likely to affect the performance of activities are managed by ensuring that certain conditions are met prior to project implementation.

Figure 4. Risk Management and the Logframe

Goal
↘
Risk management strategies
↙
Objectives
↘
Risk management measures
↙
Outputs
↘
Risk management actions
↙
Activities
↘
Risk management actions and inputs

Using the Logframe

The logframe provides a summary of the project design and can be used throughout the project cycle (see Figure 5 below). Ideally, the process of developing a logframe should begin at the project identification phase with a statement of the overall goal and suggestions for possible project objectives.

The finer details of the project will then be spelled out in subsequent stages of the project management cycle. The feasibility stage provides details of the activities and inputs necessary to obtain the planned outputs. The design stage completes the logframe, adding details such as monitoring criteria. During implementation the logframe serves as a checklist of activities and inputs, as well as criteria for monitoring.

Figure 5. The Project Cycle and the Logframe

Development strategy
↘
Goal
↙
Project identification
↘
Objectives
↙
Pre-feasibility
↘
Outputs
↙
Feasibility design
↘
Activities
↙
Implementation

The process of formulating the project design and developing the logframe is not always a linear process as set out in Figure 5. For example, a project identification mission may suggest possible outputs and activities in addition to identifying the goal and objectives. Subsequent stages of the project cycle may then analyse, elaborate, confirm, reject or modify these elements: each stage of the project cycle is a further definition of project components.

Developing the Logframe

How do we develop a logframe analysis? Using a practical example of a library-based project to illustrate the major points, we present a logframe template in Figure 6 below and a real-life completed logframe matrix in the Appendix. The best way to develop a logframe is to use a participatory process involving all stakeholders to analyse the need for the project, its aims, and the components that would help to achieve these aims and meet the needs.

Figure 6. Logframe Outline

Narrative	Indicators	Means of Verification	Risks and Constraints	Risk Management
Goal	•	•	•	•
Objective	•	•	•	•
Output	•	•	•	•
Activity	•	•	•	•

The goal

The goal is a single statement of the overall development aim of a project and may be linked to a wider national, regional or sectoral plan. In the Appendix, which is the logframe for Information Networks for the Future, an actual project funded by the New Zealand Ministry of Foreign Affairs and Trade, the goal is:

> to facilitate the development of Vietnam's capability in science and technology (S&T) information by the introduction of: effective S&T information infrastructures through training, and effective exchange of S&T information via Vietnamese institutions.

In some cases the goal may be very specific; this limits the scope of the project.

Key Points about Project Goals

- there should be only one goal per project
- the goal should be focused and achievable
- the goal should not be too broad or ambitious
- the goal may be wider than the project itself

The indicators are a measure of the contribution of the project results to achievement of the overall goal in terms of timing, quality, impacts, and sustainability. The last is particularly important, as it provides a measure of whether the project has provided the basis for lasting benefits. Inn the sample project the goal-focussed indicators are:

> establishment of a Vietnam-wide S&T information infrastructure evidenced by the appointment of persons responsible, establishment of a formal network of institutions using the information infrastructure.

Such indicators are usually verified at the evaluation and compared with baseline information obtained at the beginning of the project. The means of verification are the sources of information at the national and sectoral levels, usually national statistics, which can be used to obtain the necessary data.

The risks and constraints identified at this stage affect the overall rationale for the project. These risks and constraints should include:

- those that are to be addressed within the project itself
- those that are outside the immediate project but are likely to be addressed through other activities and initiatives
- those that could pose a threat to the success of the project as they cannot be addressed, either within or outside the project.

The risks and constraints at the goal level help to provide an indication of the potential areas for significant social and economic impacts of the proposed project. These impacts should then be looked at critically during the screening process. Any significant negative impacts at this level are likely to be a symptom of a faulty rationale in the project selection.

Risk management strategies at the goal level indicate what objectives are needed to contribute to the achievement of the goal. Specific objectives can be set for those risks and constraints that can be managed within the project. Those that cannot be managed within the project are identified, along with an indication of whether they will be addressed elsewhere, in other projects, for example. If a risk cannot be managed within the project or by other factors, this indicates a faulty rationale at the goal level and has significant implications for the success of the project.

The Objectives

The objectives are the primary reason for the project – in the Appendix there are three principal objectives, perhaps too many for a project of this magnitude (just $100,000 from the New Zealand government). The objectives are derived from the problems that the project is designed to address, the developments expected during the project or the expected situation at the end of the project. A primary consideration is sustainability - whether the project is able to establish the basis for lasting benefits.

Key Points about Project Objectives

- the objectives should be stated explicitly and not be just the goal or output statements reworded
- a project may have more than one objective, but the number of objectives should be limited to reduce complexity – too many objectives means that the goal is too broad
- the objectives should be realistic, the results measurable and the achievements sustainable

The indicators measure the conditions that show whether the purpose of the project has been achieved at its conclusion. The indicators should be determined by the feasibility study in consultation with the intended beneficiaries and any partner institutions. The risks and constraints identified in the logframe for the project goal should help to identify these indicators. In the Vietnam project the first objective, 'to initiate information policy formulation and have effective policy in place by 2003', has three means of verification:

> existence of Vietnamese information policy documents on government information and for science and technology use, policy documents meet international standards, a formal review of policy documents by government agencies and other stakeholders.

What Indicators Should Measure

- quality (what)
- quantity (how much)
- time (when)
- locality (where)
- responsibility (by whom)
- beneficiaries (for whom)

The means of verification are the sources of information at various levels - project, local, sectoral - which can be used to obtain the necessary data. These are used at the completion of the project and may be obtained directly from the data gathered during the project itself, or by surveys and questionnaires during the evaluation study, to compare against baseline data.

The risks and constraints identified at this stage will influence the design of the project. They help to identify the potential social, economic and other impacts resulting from the project, as well as the potential political, cultural and social constraints that may affect the success of the project.

The risk management measures described at the objective level will identify what outputs are required to achieve these objectives within the project design. At least most of the risks identified at the objective level should be managed by the project itself. Any risks deemed unmanageable at this stage have important implications for the project design and may be an unacceptable risk for the project's success.

Outputs

Project outputs are the direct and measurable results expected from carrying out the project activities. The outputs are the logical steps required to meet the project objectives. They should be action-oriented and give a clear picture of the final results of implementing the project. The indicators measure the quality and magnitude of the outputs and the effectiveness with which the outputs meet the expressed needs of intended beneficiaries.

The risks and constraints described for the objectives in the logframe identify the factors that are critical to the project's success and those that would be most useful in monitoring impacts. The means of verification are the sources of information at the project level which can be used to obtain the necessary data. The information collected during project implementation and monitoring, as well as specific surveys carried out during reviews, help to provide this data.

The risks and constraints identified at this stage will determine the design of the project. These should include the various impacts of the proposed project outputs identified during the project appraisal process. The risks and constraints to the achievement of desired objectives through the effective use of project outputs should also be identified here.

The risk management column provides a basis for deciding what activities are necessary to ensure the success of the project and how they should be implemented. This column helps to define the process used in carrying out activities. These activities may contribute directly to one particular output, or to more than one output, but all the risks identified at the output level should be addressed within the current project itself.

Activities

Project activities are the precise tasks carried out using resource inputs in order to achieve specific outputs. These include activities such as training (for example, of library staff), institutional strengthening (for example, developing infrastructure policies at various levels) and technical co-operation (probably the most sought after area for development assistance at present). Inputs may be individuals, technical equipment or funding. At this level of the logframe the timing, costs and quantities of inputs should be specified. The roles and responsibilities of the intended beneficiaries and other stakeholders could also be specified.

The indicators are a measure of magnitude and quality of the actions being carried out and the efficiency with which these activities are being implemented: these are the monitoring criteria. The indicators at the activity level should be measures of quality (what), quantity (how much), time (when), locality (where), responsibility (by whom), and beneficiaries (for whom).

The information for monitoring should be collected on a regular and routine basis and look critically at the development impact of project activities. The purpose of ongoing monitoring is to bring problems to the attention of project staff at an early stage so that remedial action can be taken to redress the shortcomings.

Involvement of project stakeholders in monitoring is an effective way to ensure ownership of the project by the stakeholders as well as helping to identify possible solutions to problems. The risks and constraints described for the outputs, as well as the impacts identified during appraisal, provide a useful checklist for the types and content of the indicators used for monitoring.

The means of verification are the sources of information at project level which can be used to obtain necessary data. Much of this should be collected as part of the project implementation. The use of surveys, self-monitoring, and periodic reports can be used to obtain the information.

The risks and constraints identified at this stage will affect the successful completion of project activities. The risks and constraints should include those that affect the efficient use of project resources and the way project activities are carried out.

At the activity level, the risk management column identifies how risks will be managed by other activities of the same project, by the requirement for certain preconditions before the start of the project, or by the way in which the activities are to be carried out.

Conclusion

Logical framework analysis is an excellent tool for planning, implementing and monitoring of a wide range of information-specific development projects. The process of developing a logframe allows project planners to work out the essential components of a project design in a systematic and logical manner, keeping a strong focus on desired outcomes.

The logframe can become restricting if the methodology is used to justify a ‘blueprint approach’ to planning. This is likely to happen if there is an undue focus on quantitative indicators and the logframe is implemented in a rigid manner. However, when the logframe is used flexibly and a consultative approach is taken, it can be a valuable tool in development project planning and implementation, with advantages that outweigh the potential disadvantages.

Advantages of Using the Logframe

- It encourages planners to see their projects within the context of wider national or sectoral development goals.
- It allows project planners to identify the interrelated activities of a project in a systematic way and provides a holistic view of the project management cycle.
- It allows the project objectives and results to be identified clearly and helps ensure consistency throughout the project.
- It assists project planners in identifying and articulating risks and constraints and devising solutions to them.
- It provides a structured starting point for identifying activities, implementation details, costs, and monitoring criteria.
- It provides a framework for reporting.
- It provides an insight into the extent of project management control.
- It provides a summary of the project design that can be used for communicating details of the project to all stakeholders.

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About the Author

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Appendix: Logframe for Information Networks for the Future

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
GOAL				
To facilitate the development of Vietnam's capability in S&T information by the introduction of: • Effective S&T information infrastructures through training • Effective exchange of S&T information via Vietnamese institutions	• Establishment of a Vietnam-wide Science and Technology information infrastructure evidenced by the appointment of persons responsible • Establishment of a formal network of institutions using the information infrastructure	• Increase in the use of centralised and distributed information depositories by key stakeholder groups: - government - NACESTID - science and technology institutions - universities	• Lack of government commitment • Lack of skilled practitioners • Costs of global information	• Information to, and education of, government officials • Ongoing training programmes • Broad acceptance of policy initiatives in Vietnam • Commitment of MOSTE and NACESTID • Commitment of professional bodies

Narrative	**Indicators**	**Means of verification**	**Risks/Constraints**	**Risk Management**
Objective 1 To initiate information policy formulation and have effective policy in place by 2003	▪ Existence of Vietnamese information policy documents on government information and for science and technology use • Policy documents meet international standards • a formal review of policy documents by government agencies and other stakeholders	• Report of policy document review published • Written evaluation of policy review against accepted international standards	• Lack of government commitment • Lack of inter-ministerial cooperation • Implications involved in monitoring policy implementation	• Work with government officials on policy construction • Build relations with key stakeholders and individuals responsible for input to policy • Demonstrate benefits in international and national networking
Objective 2 To create information management skills development by training Vietnamese counterparts in development databases, indexes, networks and educational material produced to a high standard	• Evidence of stakeholders and participants being involved in the planning, development and construction of working databases on science and technology in Vietnam • Publication of training materials in English and Vietnamese in manuals that can be transferred to other persons and to other trainers to disseminate the training programme • Initiation of a process of written evaluation of the training materials following a review by trainers, by the participants and by the government institutions involved	• Written annual review published in Vietnam in each year of the project • The training programme and written annual review will be tested against published criteria established at the beginning of the project	• Acquisition of skills to necessary level • Skill maintenance • Equipment maintenance	• Training programme addresses skills acquisition • Train the trainer as part of training programme • Ongoing contact with project partner • Education about the importance of equipment maintenance

Narrative	**Indicators**	**Means of verification**	**Risks/Constraints**	**Risk Management**
Objective 3 To monitor programme establishment and evaluation by: • Ensuring that information systems reach target audiences and influence practice • Ensuring that educational programmes reach target audiences and influence practice, and that • systems and programmes developed and implemented meet published criteria	• Collected evidence of use of the training programmes in the targeted institutions and within other Vietnamese government agencies • Collected evidence of the impact of the training on the practices of stakeholders	• Survey of participants on the effectiveness of the training programme on their work practices • Publication of annual evaluations and reports to both the Vietnamese stakeholders and MFAT in English and Vietnamese • Publication of a final report at the end of the project	• Skill levels not adequate • User needs not met	• Ongoing evaluation of training to ensure skill level adequate • Ongoing evaluation of user needs to ensure programme relevance

Narrative	**Indicators**	**Means of verification**	**Risks/Constraints**	**Risk Management**
OUTPUTS				
Output 1 To ensure information policy is well established, facilitated and adopted by all sectors by making: • policy documents available and endorsed by key stakeholders, and by ensuring that • policy parameters meet international standards	• Collect evidence with Vietnamese counterparts that policy influences decision-making, that resource allocation follows policy, and that the legislative framework in Vietnam supports policy	• Survey of stakeholders to discover use of information infrastructure and the ease of use within the legal and authoritative structure in Vietnam • Survey across a wide range of affected stakeholder institutions to measure of effectiveness distribution of outcomes • Vietnamese government information policy viewed	• Lack of government commitment • Private sector not in line with government policy • Political considerations inhibit putting in place of appropriate legislative framework	• Key stakeholders maintain pressure on government members • Education of senior civil servants in key ministries
Output 2 To promote planning and adoption of a national information infrastructure with efficient IT networks throughout country	• Evidence of the adoption of a plan to expand the information infrastructure and information networks in Vietnam • Evidence of a long-term strategic plan to ensure information dissemination across all sectors of Vietnam	• Government planning and inclusion of policy development in official documents • Citing of official documents and, where practical, evidence that networks are evaluated regularly	• Lack of investment capital • Lack of government funding • Lack of government commitment	• Policy framework supports investment • Government commitment maintained by pressure from key stakeholders • Competitive advantage demonstrated in business plans

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Output 3 To enable dissemination of applied research and development by ensuring that knowledge in recent publications and electronic documents is used to develop practice in agriculture, industry, etc. in all regions	• Evidence of the use of the applied research in both central and regional government and institutional documents • Evidence that the research is applied in workplaces as part of the implementing the national information policy •	• Vietnamese stakeholders in a sample of regions will be surveyed for evidence of use of such publications • Vietnamese stakeholders in a sample of regions will be surveyed for examples of change in practice due to such interventions	• Inadequate uptake of technology for electronic transmission of knowledge • Documents not in appropriate or accessible language • Local practitioners averse to change	▪ Training programmes on use of technology in regions ▪ Monitoring of documents for accessible language ▪ Clear demonstration of benefits of change accompany new knowledge
Output 4 To develop multimedia presentations of applied research findings and ensure that such presentations take place in all regions, and to enable skills development by the Vietnamese stakeholders in multimedia production for training	• Production of a multimedia presentation about science and Technology information in Vietnam produced in Vietnamese • Confidence in the use of the materials produced by the Vietnamese stakeholders at all levels from senior management down to field workers and staff in Vietnamese institutions	• Survey of regions and local NACESTID centres to ascertain use of presentations • Local attendance at presentations meets agreed levels and expectations of the Vietnamese counterpart	• Presentations not of adequate standard • Lack of local interest	• Training programmes of high standard

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
ACTIVITIES Workshop 1 ***(National Information Policy and National Information Needs)*** To plan and conduct a workshop which will train attendees on the nature of a national information policy and enable evaluation of national information needs in Vietnam	• Participants will be able to: - create a plan for a national information needs analysis - undertake a needs analysis for information collection, dissemination, and archiving - understand and apply policy formulation and implementation procedures	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 2 ***(Digitising National Resources)*** To plan and conduct a workshop which will train attendees on the digitising national resources, digitisation techniques, on archiving and network techniques and on intellectual property issues	• Participants will be able to: - list and archive of currently digitised resources in Vietnam - display an understanding about how to set up a national network of digitised resources	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 3 ***(Information Services)*** To plan and conduct a workshop which will train attendees on indexing and abstracting techniques, on database standards and procedures and on controlled vocabulary (thesaurus) construction	• Participants will be able to: - Create a basic index - Set database standards - Create a thesaurus structure	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs. • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

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Narrative	**Indicators**	**Means of verification**	*Risks/Constraints*	**Risk Management**
Workshop 4 ***(Needs Analysis for Fieldworkers)*** To plan and conduct a workshop which will train attendees on techniques for needs analysis, how to identify community 'gatekeepers', how to train fieldworkers, and how to analyse training results	• Participants will be able to: - analyse information needs in a typical community - identify 'gatekeepers' in a typical community - train other fieldworkers, and - analyse the training outcomes for others	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices. • Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 5 ***(Information Presentation: Video)*** To plan and conduct a workshop which will train attendees on how to locate information resources for video production, instructional design techniques and, use of multimedia for information transfer	• Participants will be able to: - locate appropriate information resources - script for effective instructional outcomes - use multimedia to transfer information - train other trainers to create video	• Production of outputs in visual form from teams of the participants in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs. • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 6 (Information Presentation: WWW) To plan and conduct a workshop which will train attendees on Web techniques for information dissemination, and Web-based multimedia resources	• Participants will be able to: - Use the Web to disseminate information - create multimedia resources on the Web - train other trainers in Web access skills	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	**Indicators**	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 7 (Multimedia Presentation Skills) To plan and conduct a workshop which will train attendees on communication skills for presenters, and techniques for communicating on film and video	• Participants will be able to: - practice communication skills on video - present selected S&T information in appropriate formats - train other trainers for work with regional staff and fieldworkers	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	*Indicators*	**Means of verification**	*Risks/Constraints*	**Risk Management**
Workshop 8 Advanced Digitisation Techniques To plan and conduct a workshop which will train attendees on understanding and using new digitisation technologies, understanding the location, significance and use of heritage databases in Asia, and understanding and applying security provisions for digitised materials/artefacts	• Participants will be able to: - use new technologies in digitisation of resources - format a Vietnamese heritage database - introduce security measures to protect resources	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

Narrative	*Indicators*	**Means of verification**	***Risks/Constraints***	**Risk Management**
Workshop 9 (Evaluation Techniques for Information Services) To plan and conduct a workshop which will train attendees on sustainable information systems/services, appropriate evaluation techniques/procedures, and how to maintain flexible infrastructures/services	• Participants will be able to: - review NACESTID's networking policy - select relevant techniques for NACESTID - evaluate S&T information dissemination to selected communities - put in place ongoing evaluation protocols	• Production of outputs in written form from each participant in the workshop • A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices • Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs • Workshop is well conducted and meets training needs	• Participants' English language skills inadequate • Workshop too advanced for participants' basic knowledge	• Careful assessment as part of feasibility study and in preparation of material • Use of feedback from previous workshops

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Small is Beautiful: the library train for homeless children

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Abstract:

The paper presents an inspiring story of a determined effort to reach out to the children in high-risk situations providing them with a charming library on old train carriages. The Library Train Project was initiated in 1999 by the railway policemen of the Railway Police Division within the Royal Police Office, Thailand who also look after its operation. It is aimed at offering education services to homeless children as a way of reducing the crime rate and child exploitation by channeling children to more constructive activities. The Library is equipped with a book collection, toys and computers. It serves as an informal classroom where learning activities take place everyday. The children learn to read and write and to appreciate cleanliness, good health and beauty from a carefully designed and nurturing environment. This paper also highlights creative approaches used by the Project's initiator to gain support from governmental and non-governmental organizations, mass media, libraries and the general public.

Street Children in Thailand

Since the past decade, Thai society has become confronted by an alarming problem of wandering street children. Poverty, broken families and negligent parents drive the troubled children from home to the streets in big cities like Bangkok, Chiang Mai, and Pattaya. In 1998 the Office of the National Education Commission reported there were approximately 15,000 street children in Thailand. However, a Christian priest who runs a social welfare center for children commented that this figure was just a tip of the iceberg.

Street children usually are in poor health conditions, physically, emotionally and even mentally in some cases. They wander from place to place and struggle to survive from day to day. Some earn small money by doing humble jobs such as washing dishes, polishing shoes or selling newspapers, garlands, flowers and lottery tickets. Others beg for money, steal or scavenge through rubbish for what they can eat, use or sell. They hang out around temples, food markets, department stores or railway and bus stations where they can easily find food and living facilities. They sleep under bridges, on the beach, at construction sites or in any deserted place. Most of them have not opportunities to attend school and become easily cheated. Some join criminal gangs, many others have been victimized through drugs, child labor and prostitution.

Child welfare services provided by the government are not adequate. Detention centers are criticized for their negative approach in looking after children, for lack of warmth and loving environment, and for rigid control enforced by strict rules, discipline and punishment. The growing problem of street children has raised concerns among organizations involved with children. Currently, several governmental and non-governmental agencies and kind-hearted individuals devote their attention, money, time and efforts to help solve the problem, including the Railway Police Division that runs the *Library Train Project.*

The Library Train Project

The *Library Train Project* was initiated in 1999 by *Police Major General Jarumporn Suramanee,* the commander of the *Railway Police Division*, the Royal Thai Police Office. The Library Project, in fact, stems from the *Streetside Railway Police Teachers Project* in which the railway police helped solve the problem of street/homeless children in *Hua Lumpong* train terminal area through a non-formal education program. This program is aimed at teaching basic functional literacy as well as social norms to enable street children to survive in a normal society. With a positive approach, it also helps prevent these children from committing crimes and protect them from child exploitation. Each day a three-hour class took place in the terminal platform or railyard amid the noise, air pollution and possible danger from the busy locomotive traffic.

Being aware of the problem, Commander Suramanee looked for a place more conducive to learning. He proposed to provide a proper classroom using old train carriages. The Governor of the *State Railway of Thailand*, seeing many benefits to be derived from the suggestion, gave two train carriages to the project. A vacant plot of land at the Division's headquarters was set aside for locating the carriages.

Beautiful Junks

Being a library minded person, Commander Suramanee planned not only a classroom but also a library to support the education of homeless children. After four months of modification (April - August 1999), the biggest pieces of junk in the railyard—two old train carriages—were transformed into a small beautiful library (24 square meters per carriage). It is named in Thai *Hong Samud Rotfai Yoawachon*, which means the *Library Train for Children.*

The railway police commander planned, managed and monitored the modification, which was undertaken by the railway police officers and workers. The work clearly reflects the idea of conservation through the reuse of thrown away materials. The commander himself sorted through the pile of old train components to acquire gadgets, posters, and decorating items. They were either repaired or remade with taste and put to good use. Thus the interior of the library was designed in a way that the charm of the old Thai trains is preserved. Such design attracts both children and adults. Children are fascinated by its antique look, and for adult visitors, it brings back the memories of childhood.

The first carriage serves as a library. Books and magazines are mostly acquired through donation. However, donated items are sorted out and only those in good condition and with appropriate contents are selected to fill the shelves. The collection is roughly classified according to types of publications and subjects. It contains books for children and adults. The library is intended for leisure reading, which will encourages children to develop a good reading habit. It also owns some basic reading materials that support education such as textbooks, teachers' guides, non-fiction and reference books.

The second carriage serves as a classroom and area for recreational activities. A three-hour class that was once arranged around the train terminal currently takes place daily in the other carriage of the library. This carriage is equipped with a television set and four Macintosh computers loaded with Computer-Assisted Instruction (CAI) software. The computers help children learn subjects such as mathematics and English faster in a fun way.

Education Embedded in a Carefully Designed Environment

The library is located in a 200-square-meter compound, which is very carefully designed to educate children. The area is park-like, green and shady with trees. A herb garden provides a natural means of learning. Children learn the properties of different herbs and know how to use them for cooking or healing minor injuries and sickness. They learn how to nurture life through taking care of the garden. Hygiene is introduced when they are taught to take care of themselves, the library and its surroundings. Art is integrated in every design and decoration. Old train and railway components such as a steam engine, lamp posts, and railroad signs, used to decorate the place and put on display, illustrate a museum concept. Sports facilities enable children to exercise, play and improve their health conditions. By working and playing together, children learn about teamwork, roles and responsibility, self-discipline, and public spirit.

Classroom education also takes place every day for about three hours a day, usually in the afternoons. Nine volunteer police teachers, both female and male, are divided into three groups that take turns to teach and take care of the children. The teachers are trained to understand the psychology of troubled children. After the relationship between the teachers and these homeless children is established, the children will call their teachers "Mama" and "Papa." The teachers automatically take parental roles. In addition to teaching, they look after the well being of the children and protect the rights.

In each class, there were about ten boys/ young men. Their ages range from 6 to 18. They are taught and taken care by three teachers who can afford to pay them individual attention when needed. Subjects taught include reading, writing, numeracy, computer skills, civics and drug education. Survival skills and social norms are integrated in teaching. The number of children attending classes varies, as they are free to come and go. The railway police commander pointed out, "Street children have a strong sense of independence because they have struggled on their own long enough before coming to us. We would only drive them away if we impose strict rules on them. So we need to adopt a positive approach and make them trust us. After gaining their trust, steering them to the right direction will not be too difficult a task. Anyway, for those who want to stay, we provide them beds, meals and medical care."

After class, the children can read in the library, play with the computers or watch television. They can do outdoor activities, play some sports, or go to work, if they have jobs. According to the commander and volunteer police teachers, the children have shown signs of improvement. They have become less aggressive and speak more politely. They are more willing to lend helping hands to the teachers such as taking care of younger children. Some have stopped sniffing glue. Those who work and earn are taught to save money by opening their bank accounts. At present, three boys who have been with the project from the beginning have continued their studies in the non-formal education programs of the Ministry of Education.

The Library Train is also for the Community

Not only the homeless children but also the railway police and the community have benefited from the Library Train Project. The library and the mini park are open to the public everyday. Students from other schools come to use the library. Some small children ask their parents to bring them to the library because they found it fascinating. In a quiet corner, some users are found to do serious reading. People who reside in the neighborhood drop in to read newspapers, take a leisure walk, or rest under the shady trees. College students come to organize education or reading promotion activities. Library science students, teachers and librarians pay numerous visits to learn about innovative ideas. The railway police commander tirelessly tells the inspiring story of the beautiful library.

Gaining Support from the Public

When started, the Library Train Project did not have any financial support. Contributions came in other forms. The Governor of the State Railway of Thailand provided the train carriages, land, necessary equipment, and free medical care. The railway police officers give time and labor to modify the library and the landscape. Volunteer police teachers devote their time and efforts to teach and take care of the children. Organizations that provide social welfare and education services for children such as the *Foundation for the Better Life of Children*, the *Mercy Center*, and the *Ministry of Education* offer consultation and cooperation. The commander and his family donated the first amount of money to get the project off the ground.

When the library was completed, its attractive look and its humanitarian and educational objectives drew the attention of the public and media. Contribution in cash and kind began to flow in. The *Nortel Network Company* donated four Macintosh computers to support education. *Sahawiriya*, a local computer software company, offered some educational software. The *Canadian Embassy* donated Can$20,000 through the Canadian Fund for Local Initiatives (in Thailand). This amount is for a two-year lunch program and expenses of the children under the project's care. Books, toys, clothes, food and cash donations also come from individuals who heard of the project or visited the library. An Australian couple pays regular visits to the library, particularly the wife who, in addition to donation, organizes an informal English and art classes which the children enjoy. Several international organizations have visited the library, for instance, Save the Children from the UK, the United Nations Children's Fund (UNICEF), and university administrators from Japan. The Library Train Project is also popular among the media locally and internationally. The project has been aired on Reuter, CNN and NHK.

A Model for Community Libraries

Several private and public agencies have expressed their interest in the success story of the project. They feel impressed by the innovative aspects and holistic approach in using the library to solve social problems and develope a positive image of the police force. The railway police have been encouraged to launch similar projects in other areas of the city.

Recently, the Railway Police Division with funding from the *Siam Cement Foundation* has begun a new library project for a slum community in *Bang Sue District*. The upcoming library is patterned after the successful Library Train. It is aimed to serve the community of which many young people are addicted to drugs and the majority of residents are under-educated and unemployed. While railway police teachers administer an educational program, a librarian will be hired to provide library services.

Useful Approaches for Librarians

The Library Train may not offer professional library services as what we see in standard libraries. However, it clearly reflects an important concept of libraries making a difference in the society. This particular library has renewed many lives of street children. The public find the project meaningful and welcome it with overwhelming support.

The project is cleverly designed. While it is based on the community's problems and needs, it has brought about an appreciation of the role of the railway police. It started as a small and manageable project through the maximization of limited resources. Without budget, it adopted the sustainability concept of renovate, repair, remake and reuse.

In designing the educational program for street children, a holistic approach is used. Education takes place in a classroom as well as in a carefully designed environment. A natural means of education used is appropriate for the target group. The library, equipped with print and computers, is provided to support literacy, non-formal education and voluntary reading. Social norms are integrated in teaching to prepare the children to return to normal life.

Institutional cooperation is another strategy used. The project works with several other organizations in dealing with the issue of street children. The spirit of cooperation helps the project initiator and staff to achieve their goal under resource constraints. It also increases the capacity of the project to expand its activities.

Through different media, the project has become widely known and gained participation. In introducing the project to the visitors, the railway police commander always provides well-prepared handouts to the audience to ensure that essential information has been communicated correctly.

On top of everything, all project staff members work with deep commitment to contribute to the betterment of the society. Strong leadership, flexibility and adaptability are demonstrated in the ways they solve problems and accomplish tasks. In the opinion of the railway police commander, librarians also need flexibility and adaptability in designing library services to meet the needs of the community. "Responsibility is not enough! Commitment and service spirit are ingredients for successful efforts. If librarians work with a service spirit, they will certainly earn respect and support from the community," he said.

We, librarians, have been often criticized for our rigid adherence to rules and regulations and obsession to the technical side of library management. Many of us fail to make our roles visible to the community. The authors sincerely hope that the ideas and approaches illustrated in this paper will be useful and adaptable in making library services more meaningful, and that one can start SMALL and yet provide beautiful services.

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Local needs; global help: soliciting funds for a library in an isolated community in Papua New Guinea

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Abstract:

Rural communities in Papua New Guinea (hereafter PNG) have been having problems accessing much needed information, while traditional bodies of knowledge are slowly disappearing as the old generation passes on. A possible agent to spread information in a school library as this paper argues. Schools are best located in rural areas and aside from providing information to school children and teachers it can also be used as a medium to spread information to rural communities.

However, Schools without a library are a problem in PNG and will continue to be so unless initiatives are taken to allow for expansion of this service to Community and High Schools in the country. Learning not only occurs in classrooms, but students must be encouraged to read and expand their knowledge. Within Wantoat there are thirteen community schools and that the plan is to have a network of library service to all community schools in the District in future.

The Leron- Wantoat case study discussed in this paper outlines plans for school library network in the district. It discusses what has been done at the planning stages and a further review will be needed after the project has been implemented and results of actions observed during the operations of the library network. It is also meant as an advisory paper for those who may be interested in doing similar projects for their own areas

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Introduction.

Library services in PNG were introduced during the colonial era and after political independence, it has continued to expand to the present day. The development and expansion of these services is often hampered by numerous factors as experienced in many developing countries. There is often lack of government support and that as a result libraries in particular in schools have been neglected and or no existent. This paper discusses an innovative strategy that I have tried in the last few years trying to develop a library service to serve thirteen (13) community (Primary) Schools in my own District of the country. This project started as a result of request from the School Board of Management and teachers of the school.

While there is lack of support and government support there are other means of gaining support and the people need to take lead and initiatives instead of waiting for government support. This is an example of community involvement and initiative. At the request of teachers and parents I drew up a proposal for a school library service and submitted to donor agencies; in particular foreign embassies in the country. This paper outlines the issues and summaries what happened during the years 2000 to this year.

Spreading information to rural communities in PNG has been neglected, while traditional knowledge of communities is disintegrating at a faster rate. Although, this paper focuses on a school library network, it was also felt that the library becomes part of the information center for the community.

A major concern is lost of oral traditions of the people and thus, a need for the recording and preservation of the traditional indigenous knowledge. As the title may show this paper is not only concerned with a `school library' but rather a `Community Resource Center'. It is envisaged that aside from providing school library books, an information resource center will be created as well. Any written or recorded documents about the District would be deposited here, as a historical collection for the District. Future research and documentation programs about the district will also be deposited in the main library in the school at the District headquarters.

There are community schools in PNG that operate without a library at all. This applies to both rural and urban Community and High School Schools. The problem had been lack of support for the schools to have such facilities in the past. Unfortunately the trend continues today. Alternative means and ways have to be found to develop and provide information to the schools and the rural communities.

Project proposals and submissions can take initiatives and may or may not be funded at all. There have been continuous project proposals that have been knocked back by government for so long. Very often the excuse is there is no money. In this case local initiatives has been the driving force behind this school library project. I was approached by parents and headmaster of Wantoat Community School to help set up a school library. Being a former student of the school I was obliged to render my expertise as an adviser to this project.

1. Wantoat District.

The Wantoat District lies in rugged Finnistere and Saruwaged mountain ranges along the border of Madang and Morobe Provinces. (Refer to map) It constitutes Wantoat, Awara, Irumu and Bungam Census Divisions. Awara, Irumu and Bungam Census divisions are far from central Wantoat valley where the headquarters was set up.

The Wantoat population as at 1980 Census was 35,000 with 100 villages in Awara, Irumu and Bungam Census Divisions. Economic activity is rather slow as coffee is the only cash earner. The rugged countryside makes road conditions difficult for people to transport their produce to fresh food markets in Lae. There are small trade stores and fresh food markets in Wantoat and along the road, but because of difficult terrain, it is impossible to start a viable business venture in Wantoat.

In 1918 Rev. Karl Holzknecht established the first Lutheran mission station at Kaiapit on the Markham Valley. The first European, however, to reach Wantoat was in 1927 from Kabwum with a group of local evangelists[1]. Initially there were evangelists from Kabwum left at main villages of Bumbum, Matap and Mupiapun.

The work and expansion of colonial administration came much later. Administrative patrols were carried out from Lae. In 1936 L.G. Vial[2] went on a patrol to take census and bring about colonial law and order. He was the first patrol officer to issue villages books and appoint *tultuls* and *luluais* in Wantoat. Unfortunately for the colonial administration, in October the same year, Suenda villagers wounded patrol officer Tom Hough. It took the carriers two days to carry Hough over the hills to Kaiapit and then flown to Salamaua and died later at Salamaua Hospital[3].

During the war year (1942-1945) mission and colonial activity was suspended, as foreign workers left due to the war. According to documents available Wantoat was heavily used by allied troops chasing Japanese who used this route from Kaiapit to Saidor or vice versa during the war.[4]

In 1947 Kaiapit District Headquarters was re-established, as an administrative post. It paved the way for patrols into the interior of Kaiapit District, which included Markham headwaters, Yaros, Awara, Irumu and Wantoat. Two years later in 1949 James Sinclair[5] patrolled into Wantoat with instructions to set up a patrol post and to `capture' culprits of a pay back murder in Numbugu village in Ufim Census Division, Markham Headwaters[6]. Sinclair was also instructed to extend the airstrip built earlier by a Chinese businessman to grow vegetables and sell in Lae markets. During the patrol Sinclair witnessed displeasure of Jabem and Kate schools. The *Luluai* of Gwambongwak village wanted the children to learn English instead of mission schools, which often taught their children `Bible stories'. Accordingly, James Sinclair concluded that this was `the cargo cultic' expectation of English language, which was widespread in the District.

2. Mission schools.

Wherever, the Lutheran mission went they started off with a school. The schools were to teach local people to read and write, and then translate the Bible and to spread the new religion. The introduction of mission schools led to a classroom-learning environment for the first time in Wantoat. This began a new system of learning, which later led to a structured and graded system of education. The mission schools used Kate and Jabem languages as mediums of instruction, which depended, on which side of Wantoat River a village was located. Those to the West used Jabem and the East used Kate language.

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[1] Wagner, Herwig and Hermann Reiner (eds.) 1986. The Lutheran Church in Papua New Guinea: The First hundred years, 1886-1986. Adelaide: Lutheran Publishing House.

[2] See for instance two articles he wrote on the information he collected during his patrol in Wantoat. The Dangagamun ceremony of the Wantoat *Oceania* 7: 341-345 and The Dam builders of New Guinea. *Walkabout* 5(1): 39-43.

[3] Sketchy reports of wounding of Hough appear in *Pacific Islands Monthly.* June 1989 page 54, January 1937 page 31, January 1937 page 52, February 1937 page 52 and February 1037 page 28. There is a need for research into this, as a villager perspective is needed as well.

[4] The Allied Geographical information published during the war years reveal the route that the troops took. Oral information often relates to Wantoat airstrip being used as a drop off point by the troops. There is also evidence of Japanese being killed by villagers in mountain range between Yupno and Kubung in Wantoat.

[5] Sinclair, James 1981. Kiap: Australia's Patrol Officers in New Guinea. Sydney: Pacific Publications.

[6] For details of this incident read; Woodward, Mary. 1977. Murder in the mountains: the story of an epic patrol to the Ufim River area, Markham Headwaters. *Journal of the Morobe District Historical Society* 4 (3): 33-46.

Despite language problems church workers did their best to educate local people to read and translate the Bible. It was an education for a purpose; they were not to advance any further after three or four years, but to work for the church. Those who passed in Village Bible Schools were sent either to Finschhafen District Bible School for Kate speakers and Mainyanda District Bible School, near Bulolo for Jabem speakers. At these schools they were trained to work for church either as evangelists and or health workers.

When English was used as a medium of instruction, Bumayong Lutheran High School, Balob Teachers College and Martin Luther Seminary were started. This was to allow for Lutheran mission to train local people to work for the church using English. These schools allowed for mission educated children to be trained using English as a medium of instruction. Eventually the Lutheran church run schools and other church run schools were amalgamated into the national education system before political independence in 1972.

Much of colonial and administration expansion started after the war. With the arrival of patrol officer in 1955, health and education services were expanded. The Lutheran missionary Guenther Herrlinger was posted to new Kongaim mission station in 1956. The colonial administration `English School' was also established the same year.

3. Colonial education system.

The colonial administration schools were known as Primary `T' Schools. Although, it was requested in 1949 as discussed above, it was not set up until 1956. With Kate and Jabem Village Bible Schools slowly loosing interest, there was pressure for colonial administration to set up `English schools'. Not many students from this school went to High School until much later. The first of the standard three levers was Stephen Mambon who was sent to Dregerhafen, near Finschhafen before enrolling at Bugandi.[7] Standard six School leavers from the school reached High School for the first time in 1969. These students enrolled at Bugandi, Busu and Bumayong High Schools in Lae before Kaiapit High School was set up in the Markham Valley in early 1970's. As a result not many students from the area have gone for further studies. The first student from Wantoat enrolled at University of Papua New Guinea was in 1974; few others have followed him. Up to now only four have graduated from University of Papua New Guinea. One is a private medical practitioner in Lae, the other is an accountant and I am the only postgraduate teaching Library study at University of Papua New Guinea.

4. The Present Schools in Leron-Wantoat.

There are ten community schools in Leron-Wantoat. Appendix One shows the names of schools, level, number of teachers and students and distance from the road. Five of them (Nariawan, Leron, Bumbum, Schniffner and Wandot) are directly along Leron-Wantoat road, two of them (Bukawe and Daum) are within walking distance and three of them (Bayamasu, Zuiebak and Natona) are out of reach from the road. A map showing the location of schools and proposed schools is also attached.

Wandot Community School is the largest with a total of 14 teachers and 508 students serving the population of central Wantoat valley. There are now plans for top-up next year with grades 7 and 8 being introduced in 2001. Another Community school and a High School have been proposed and may be built in the near future. This is the reason why a major library network is needed for the District. In the long run five schools along the road will benefit from a planned mobile library service.

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[7] I presented Mambon's life story in *Times of PNG* and another paper presented at a PIPSA conference at Monash University in 1991. (Reference to both papers are listed in the bibliography)

5. The Library Proposal

In 1999 I wrote up a proposal and took it to Wantoat to discuss it with schoolteachers. It was fortunate that I attended the school graduation as a guest of honor presenting school certificates. This gave me the opportunity to spell out the proposal to both teachers and parents.

The proposal gives a detailed study of the area, giving historical background, the number of schools in the area and the projected schools. The geography of the area was also included, as well as the road network, which in light of the proposal was very important.

While drawing up the proposal I had discussions with several embassies in Port Moresby, who indicated that they were willing to provide assistance for small projects. The school libraries were of interest to embassies and that assistance was possible.

The PNG National library was also approached to gauge their views on possible assistance. The School Library Service also agreed to provide training for teachers and to provide assistance through the school library book subsidy scheme.

6. Justification for a Library.

Schooling and education does not only takes place in a classroom but reading materials are needed to supplement teaching as well as improve general knowledge of future leaders. Libraries must be seen as a means to create and disseminate information to those who need it.

A school cannot operate without a library and that it is generally accepted that a good library will produce knowledgeable students who in tend will help inform the population. In the long run books will and should serve as a means to continue education and encourage further reading. It is my view that a good student starts reading and does independent research at an early age. Thus, a library will provide the necessities for a future `overall student' who will not only learn from classrooms, but by reading in his/her own time.

The project if supported will not only serve Wandot Community School, but other schools along Leron Wantoat road. A mobile library service is envisaged to serve other schools along the road. The Wandot Community School library will become a central location, which we hope will also become part of the cultural/resource center for the District. A cultural resource center is needed as traditional beliefs and knowledge is slowly dying as elders are passing away. The recorded information about the area will have to be deposited in this library as well. This may include published materials, and any other type of media that the library may want to collect in future.

7. Community Resource Center.

The lack of historical documents on Wantoat led to a proposal to set up a cultural and historical research collection as part of this library. I have been researching history of Wantoat and have failed to identify many sources on history of Wantoat. In fact the view is if this project was to get off the ground, it can become a cultural resource center that will not only serve students with books, but also become a Wantoat historical preservation and storage center.

Any materials written about the District will be stored here in future. Being a cultural center artifacts and or objects of historical value will be preserved in this building. It can be in tapes, videos, or any other formats. In particular we are also concerned with oral traditions; dances and other information sources of the people have been slowly dying as a result of older generation passing away. An oral history program can be started with this project in future. I have research interest in this area, and Wandot Community School Library can become a repository for further research work. My own manuscripts, plus few other publications identified during research will lay the foundation for all materials on Wantoat in a section of the library. Research papers and thesis written by researchers in the past will also be deposited in this library.

8. Wandot Community School Project.

Since the start of Wandot Community School in 1956 no proper school library has been set up and there is none up to this day. I was thinking of setting up a project for the school, which laid the foundation for his future education. But the idea of setting up a library was instigated by Headmaster, (Mr. Andrew Gena) Chairman of Board of Management (Mr. Zangua) and Chairman of Parents and Citizens (Mr. Yuwia).[8] In the meantime I was also informed that Mr. Tayo Dau, Headmaster of Schiffner Primary School has plans for a double classroom for his school. As a result of this the proposal was changed to include a double classroom for Schiffner Community School.

The first stage of the project is envisaged to last at least three - four years, launching it in 1999. (1999-2002) and may extend depending on results of the first phase and needs that may arise.

For the school library, the first phase will have to go in two stages, stage one is to set up a temporary facility pending approval and funding for a permanent building. As the project advances the Library Management Board will do the review and monitoring. The board was installed at the Second general meeting in January 2000. Appendix three shows and names and titles of the ten-member board.

9. Planned Stages of Development

We anticipate a good and long-term project for the benefit of the people as well as the school. It therefore, will mean development of a library service at stages and a continuos review of operations to be made. Below is a short but brief summary of what will be done if and when the school library project starts.

It is envisaged that if funding and support comes in line with this proposal the school library project will take two steps and continual review of progress and problems that may arise. The first easy and simple one seems to be help from National Library. The National Library has been running a Kina-for-Kina subsidy scheme for all schools around the country. If we come up with some money they can top it up and buy books for the school. I for example delivered K100.00 worth of books bought from the National Library last December.

The present Wantoat School has a small library collection and will be used and expanded this year. Local expertise will be used to rebuild the shelves and other relevant renovation that may be required.

The next step will involve designing and building a permanent school library. This will cost money and fund raising will be needed to ensure that this project gets off the ground. We will have to raise funds and use the money to raise more within Wantoat.

Materials will be expensive, but there are possible donors who can supply materials for the school library. The Board will be prepared to raise funds within Wantoat as well. As soon as a permanent building is built, it will reduce the financial burden the project may face in future. This grants–in-aid proposal is being submitted to embassies that have indicated they will consider proposals for such projects.

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[8] A copy of the letter is with the author.

Personnel to manage the library will have to be trained. National Library School Advisory Service will help in this regard. This should not only be for teachers, but a local Wantoat has to be trained who will look after the library and be paid a wage in future.

Conclusion.

Despite the isolation of rural communities in this country proposals for similar projects can be drawn up. There are many rural community schools that do not have libraries, which can be used to serve the students to develop their reading skills.

Where there is a road network and several schools along the road a system can be arrange for continual movement of books from school to school allowing for a mobile service.

The proposed library service for Wantoat will serve many schools and we also have plans for a cultural/historical research collection of materials about the area. It is hoped that a Wantoat cultural center will develop as a result in future.

Rather than waiting for assistance from government local initiatives should be encouraged especially if there are ways and means of soliciting funds and materials for small projects in rural areas of the country.

I have personally learnt from this experience and I am of the view that other communities in the country can benefit form similar project plans and activities if they are prepared to commit themselves to such projects. The schools that have been without libraries can be supported and villagers and teachers plus good support from leaders and educated people can come up with good proposals.

As I have shown in this case study if good proposals are drawn up the donor agencies and embassies are sure to support. It has to be detailed outlining the current problems, justification for the project and plans for management if the project is approved and funded. Many organizations in the country have not been able to so do as a result of lack of ability and understanding to seek alternative support rather than waiting for government support.

Further to this had been the fact that this project has shown me the need for coordination and sharing of resources in a developing country that often lack the facilities and means to provide service to rural community. This small library project, for example would not have been possible without help from the Schools board of management, the University of Papua New Guinea, the National Library and the donor agencies. These all worked together to see the results, and it has also shown that there is a need for initiatives and commitment to such projects, because if one fails to help then it is often difficult to start such projects.

Postscript (Activities Between 2000 and 2001).

A report of activities of the year has been given to parents and citizens during last vacation period. (December –January 2000-2001). In brief a short summary is presented in this part of the paper as a postscript. Before writing the proposal I rang around most of the embassies to find out if they had programs for assisting small projects. Thos who agreed sent me application forms and gave me some guidelines in writing the project proposal. By February 2000 a proposal was written and submitted to all embassies in the capital Port Moresby. Some embassies have application forms for small activity schemes and these were sent to me to fill in and submit.

This process took longer than expected, as I did had to need quotes to all the items including books, buildings and other library materials. In total we put in a proposal and quotes for a figure up to K123, 000.00 (US$ 10,000.00) and submitted it with the application forms. In March 2000 the British High Commission responded to our request by giving us K5, 000.00 (US$2000) of which was used to buy books from a local book dealer. The donation was acknowledged and press releases were made to thank the British Embassy for the donation.

The other embassies have told us to put in a new submission for the next year and I have been doing this again this year. The responses we are waiting. In the meantime the books bought using the British Embassy Money was delivered to the Wandot Community school in May 2001 amidst big celebrations and excited parents and teachers. The newspapers and press were invited to he occasion and report in local media.

Late last year I went back to the area and officially close two schools for the term holidays and announced to launch two more school libraries in the area and encouraged parents to help raise funds. I have told the parents that we can not wait for the embassies only but must be seen to raise funds ourselves as well. At the time of writing this paper the parents and boards of management of these two schools have been raising funds and we hope to buy more books for these tow schools before the end of this year.

We are planning to conduct a workshop this year for teachers of all the schools and other local people who may want to learn the basic skills of maintaining and managing a library. The workshop has been agreed to and the PNG National Library through the school Library advisory section will help conduct the workshop.

As a token of our appreciation the people of the area asked me to invite the British High Commissioner to officiate at the opening of the school library in August this year. I am glad to report that the British High Commission has accepted the invitation and will open the library on August 1st this year.

Appendix One.

There are now ten (10) Community Schools in the area. The table below shows name of schools, level, number of staff, number of students, distance from Leron Wantoat road.

School Level Staff Students Distance (from road)

****WANDOT514508 0KM

*BAYAMASU34200 40KM

***SCHNIFFER3 4225 1KM

***BUMBUM35250 1KM

**BUKAWE23150 6KM

**DAUM34200 7KM

*ZUEIBAK34240 15KM

***LERON34200 1KM

*NATONA34208 13KM

***NARIAWAN34180 1KM

****Wandot Community School will be the base for the school library /cultural center, and the central location for a mobile library

*** The schools that can directly be served by a mobile library services if the facility is set up.

** These schools could/may also benefit from a mobile library service.

* Unfortunately, Bayamasu, Zueibak and Natona Community Schools are miles away from the road and will not benefit from the proposed school mobile library service.

Appendix Two. Budget Estimate. (Rough only) The rate: K1.00=US30cents. Temporary Library.

1. 1.1. Mobile shelf with books K2, 000.00

   1.2.Kina-for Kina subsidyK1, 000.00

2. Permanent Library

   2.1. BuildingK10, 000.00

   2.2. BookshelvesK2, 000.00

   2.3.Books (reference books)K1, 000.00

   2.4. Transport hire/costK1, 000.00

   2.5. Staff (not a salary)K1, 000.00

Grand Total (for initial two stages) K18, 000.00

There is bound to be long-term financial problems and issues. Thus the Library Board will ensure that if there was more proposals attempts will be made to ensure that this project is a continual one.

Appendix Three: Management Team.

The small library collection just starting will need proper management and planning. It was therefore felt that the meeting nominate people for this management team. Thus, the following are members of this board.

1. Mr Kaima (Adviser)
2. The Headmaster, Mr Andrew Gena
3. District Manager, Mr. Daniel Wasinak
4. Teachers Representative (to be nominated)

5. Parent and citizens Mr Eli Akon
6. Board of Management (Chairman, Mr. Levi Zangua)
7. Mr Bingmalu Yuwia-the Council Representative
8. Mr Tayo Dau, the headmaster, Schiffner Com. School
9. Mr Keputung Balang, Headmaster, Bayamasu School
10. Bumbum Primary School (Representative to be nominated)

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67th IFLA Council and General Conference
August 16-25, 2001

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Professional Group: Information Technology **Workshop**
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Multilingual access for information systems

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Abstract:

With the rapid growth of the global information society, the concept of library has evolved to embrace all kinds of information collections, on all kinds of storage media, and using many different access methods. The users of today's information networks and digital libraries, no longer restricted by geographic or spatial boundaries, want to be able to find, retrieve and understand relevant information wherever and in whatever language it may have been stored. For this reason, much attention has been given over the past few years to the study and development of tools and technologies for multilingual information access (MLIA). The tutorial will provide participants with an overview of the main issues of interest in this sector. Topics covered will include: character encoding, specific requirements of particular languages and scripts, localization and presentation issues, techniques for cross-language retrieval, the importance of resources.

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1. Introduction

The global information society has radically changed the way in which knowledge is acquired, disseminated and exchanged and is rapidly bringing about a revolution in the library world. Users of internationally distributed networked collections need to be able to find, retrieve and understand relevant information in whatever language and form it may have been stored. Many users have some foreign language knowledge, but their proficiency may not be good enough to formulate queries that appropriately express their information needs. Such users will benefit enormously if they can enter their queries in their native language, because they are able to examine and extract information from relevant documents even if they are not translated. Monolingual users, on the other hand, can use translation aids to help them understand their search results in a second language.

For this reason, much attention has been given over the past years to the study and development of methodologies and tools for multilingual information access (MLIA) and cross-language information retrieval (CLIR). This is a complex multidisciplinary area in which natural language processing and information retrieval techniques converge. The aim of the tutorial will be to contribute to an awareness of the issues involved and the different components needed to build effective multilingual interfaces and cross-language search tools for digital library systems. This paper provides a brief outline of the main topics that will be covered. For a more detailed discussion, the reader is referred to [1].

2. Multilingual Text Processing

In information retrieval, a representation of the text to be searched is usually obtained by extracting 'indexing features' from a document collection or from the text of a user's query. In a simple approach, this extraction process consists of four basic steps: conversion of characters, extraction of words (tokenization), removal of 'stopwords', and normalization of remaining content words. While these processing steps have been studied extensively in the context of retrieval of English texts, new challenges are presented when access to information in multiple languages is involved.

Language Recognition: Since processing texts to extract indexing features often involves steps which use language-specific knowledge, it is important to first establish the language of the text, if that is not already known. To date many different approaches have been used to address the problem of language identification in general texts. Approaches which have been tried range from approaches relying on the presence of individual characters [2] in texts, or the presence of particular character N-grams [3] or even on the presence of given words [4]. A common approach to language identification specifically for multilingual access uses language-specific stopwords to identify the language of texts [5].

Character Encoding: While most of the Western European languages are all covered under the standard ISO-8859-1 (Latin-1) encoding scheme, multilingual access to non-Roman languages involves addressing the issue of document encoding. The encoding of a language, or more specifically the encoding of the character set used to represent the alphabet of a given language's script, specifies the mapping between the written script and its binary representation. A character encoding is therefore specific to a given alphabet and in many cases there exist multiple mappings for a given alphabet (for example the Cyrillic alphabet used in Russian). Depending on the number of characters needed in the representation of a language, an encoding scheme can be based on a single byte (e.g. German) or must require a double-byte encoding (e.g. Chinese).

In an attempt to provide a single encoding scheme for mapping all of the world's languages, the UNICODE consortium (www.unicode.org) has designed the UNICODE standard. This provides a character encoding system designed to support the interchange, processing and display of the written texts of the diverse languages of the modern world. In processing texts for multilingual access, it is common for UNICODE compliant systems to use standard libraries to convert the native encoding of texts (e.g. Shift-JIS for Japanese) into a UNICODE format (e.g. UTF-8) as a single standard representation.

Language Specific Tokenization: Once the language of a text has been determined and the character encoding has been standardized, the next step is to identify the specific words being used. While in many languages this is straightforward because of the use of spaces to delimit words, many languages compound or concatenate words together to form new compound words. In the most difficult cases, no spaces are used between words in text (e.g. Japanese, Chinese) so that the tokenization process must determine all word boundaries. In this case, a dictionary or lexicon of valid words in the language is typically used to determine legal words. A process is then used whereby a sentence of text is scanned in order to find the set of words from the dictionary which provides full coverage of the characters found in the text. In the tokenization stage, punctuation is also removed from words and hyphens between word segments are processed.

In order to reduce the number of indexing features to be included in the representation of a text, words which have little content value are often discarded; so-called 'stopwords', e.g. *the* and *at* in English. Since between 30% and 50% of the words of a text may be included in a stopword list, the removal of such words can have a significant impact on the retrieval index. Stopwords in any given language are usually easily determined on the basis of either parts-of-speech (e.g. determiners, prepositions) or of high frequency within a sample text.

Word Normalization: The final step in processing text for retrieval indexing involves the normalization of content words remaining after stopword removal. The most common form of normalization involves reducing words to a *stem* form by removing suffixes or inflections. In the simplest case, a stemming algorithm simply removes standard suffixes (e.g. '-s', '-es', '-ation' in English) in an iterative process until the shortest form remains. The best known algorithm of this type was developed by Porter [6] for English and similar algorithms have been developed for other languages [5]. An alternative is to perform a more linguistically motivated *morphological* analysis of the text in order to identify the root forms of the words. Word normalization results in greater efficiency in both the text processing and text retrieval processes. This is particularly true when dealing with European languages, which have a much richer inflectional morphology than English.

In the normalization phase, it is also common, especially in the context of multilingual access, to attempt to identify multi-word phrases as individual index features so that phrases can be translated as a unit rather than as individual words. In many cases, a word-by-word translation of a phrase does not render a true translation (e.g. translate *'fast food'* into French or German). Phrases can be identified in a text by matching against a dictionary or lexicon of known phrases, or by using statistical procedures which recognise frequently co-occurring words as potential phrases.

Summing-up: The steps used in multilingual text processing will depend on the languages involved and on the overall approach being used within a given system for multilingual information access. The index features which result from the text processing phase must be compatible with the resource that is being used to match queries in one language to documents in possibly many other languages. It is therefore important to have an understanding of the different approaches to cross-language information retrieval and the kinds of resources used in each approach.

3. Approaches to Cross-Language Text Retrieval

Basically, in cross-language text retrieval the task is to develop methods which successfully match queries against documents over languages and rank the retrieved documents in order of relevance. In monolingual retrieval, the traditional way to do this is through some kind of word matching and weighting; with cross-language text retrieval we have the additional problem of matching (and weighting) words across languages. This implies employing some kind of resource in order to translate from the language of the query to that of the documents or vice versa, and addressing the problem of sense disambiguation, already present in monolingual retrieval but greatly increased when mapping over languages. Three main approaches have been experimented: machine translation; knowledge-based techniques (i.e. thesauri or dictionaries); corpus-based techniques. Each of these methods has given promising results but also has disadvantages associated with it.

Machine Translation: Full machine translation (MT) is not viewed as a realistic answer to the problem of matching documents and queries over languages. The goal of an MT system is to produce a readable and reliable target language version of a source text, whereas cross-language retrieval aims at finding sufficient similarities between a source language query and a target language document in order to be able to claim that the document is more or less relevant to the information needs expressed by the query. The translating of entire collections of documents into another language (that of the query) is thus not only very expensive, but also involves a number of tasks that are redundant from the purely retrieval viewpoint, e.g. encoding of linguistic, semantic and pragmatic information.

Efforts using MT systems have thus concentrated on attempting to translate the queries rather than the documents. However, queries are usually sets of words with little or no syntactic structure. Therefore, input cannot be parsed by an MT system and traditional methods of word-sense disambiguation cannot be applied as there is no semantically coherent text. Accurate translation is thus not possible but also not necessary. There is no need for a linearly coherent and unique output, in fact multiple translations of query terms can provide a form of query expansion that can improve performance. It has been shown that simpler and less resource costly techniques can work at least as effectively and that, for query translation, dictionary-based techniques can outperform commercial MT systems [7].

Multilingual Thesauri: Early experiments showed that multilingual thesauri can give acceptable results for cross-language retrieval and there are now a number of thesaurus-based systems available commercially. A multilingual thesaurus for indexing and searching with a controlled vocabulary can be seen as a set of monolingual thesauri that all map to a common system of concepts. With a controlled vocabulary, there is a defined set of concepts used in indexing and searching. In this way, the problem of ambiguity is eliminated. Users can use a term in their own language to find the corresponding concept identifier in order to retrieve documents in another language. In the simplest system, this can be achieved through manual look-up in a thesaurus that includes, for each concept, corresponding terms from several languages and has an index for each language. In more sophisticated systems, the mapping from term to descriptor would be done internally [8].

With the controlled vocabulary approach, appropriate terms from the vocabulary must be assigned to each document in the collection. Traditionally this was done manually by experts in the field. This is expensive. Methods are now being developed for the (semi)automatic assignation of these indicators. The fact remains that thesauri are expensive to build, costly to maintain and difficult to update. Furthermore, it has been found to be quite difficult to train users to effectively exploit the thesaurus relationships.

In any case, the current trend is away from controlled vocabulary searching in favour of free text searching even though, from many viewpoints, cross-language free-text searching is a more complex task. It requires that each term in the query be mapped to a set of search terms in the language of the texts, possibly attaching weights to each search term expressing the degree to which occurrence of a search term in a text would contribute to the relevance of the text to the query term. The greater difficulty of free-text cross-language retrieval stems from the fact that one is working with actual usage while in controlled-vocabulary retrieval usage can, to some extent, be dictated. On the other hand, the query potential is greater than with a controlled vocabulary.

Using Dictionaries: Many free-text cross-language systems use bilingual machine-readable dictionaries (MRDs) as their transfer resource. Such resources are becoming increasingly available both commercially and on-line. As they have generally been prepared for human use, they require some kind of pre-processing before they can be used in an automatic system. This essentially implies analysing the mark-up information to identify the different lexical information: headwords, parts-of-speech, sense division, translation equivalents, etc.

It has been demonstrated that straightforward dictionary-based query translation, where each term or phrase in the query is replaced by a list of all its possible translations, represents an acceptable first pass at cross-language information retrieval although such -- relatively simple -- methods clearly show performance below that of monolingual retrieval. Automatic MRD query translation has been found to lead to a drop in effectiveness of 40-60% of monolingual retrieval [9][10]. There are three main reasons for this: (i) general purpose dictionaries do not normally contain specialised vocabulary; (ii) failure to translate multiword terms; (iii) the problem of ambiguity.

Perhaps the greatest problem using MRDs is coping with ambiguity. In word-by-word dictionary translation, each word is replaced by all possible translation equivalents. When the query term is polysemous and thus in itself ambiguous, this can result in a large set of target search terms, many of which are spurious and will contribute to the retrieval of irrelevant documents. In sentence or document translation, the context provides information that can be used for disambiguation; the shortness of the average query means that there is a lack of context for this scope. Current research work gives considerable attention to this question.

It has been shown that both syntactic and statistical methods can significantly reduce the effects of ambiguity and bring the effectiveness of cross-language retrieval near the level of monolingual retrieval. Well-formed queries can be tagged by part-of-speech taggers to eliminate grammatical homonyms and thus reduce the number of incorrect target terms generated by the dictionary. In particular, query expansion techniques have been shown to help considerably in reducing ambiguity. Basically, such techniques add new terms, selected according to a given criteria, in order to make the query more precise. See, for example, [11], [12].

Corpus-based Techniques: Corpus-based approaches analyse large collections of texts on a statistical basis and automatically extract the information needed to construct application-specific translation techniques. The collections analysed may consist of parallel (translation equivalent) or comparable (domain-specific) sets of documents. The main approaches that have been experimented using corpora are vector space and probabilistic techniques.

The first tests with parallel corpora were on statistical methods for the extraction of multilingual term equivalence data which could be used as input for the lexical component of MT systems. The problem with using parallel texts as training corpora is that test corpora are usually domain-specific and costly to acquire -- it is difficult to find already existing translations of the right kind of documents and translated versions are expensive to create. For this reason, there has been a lot of interest in the potential of comparable corpora.

A comparable document collection is one in which documents are aligned on the basis of the similarity between the topics they address rather than because they are translation equivalent. The requirement is that they are similar in genre, register, and period. The basic idea underlying the use of such corpora is that the words used to describe a particular topic will be related semantically across languages.

The best known cross-language strategy using comparable corpora is the multilingual similarity thesaurus approach. [13] reports results using a reference corpus created by aligning news stories from the Swiss news agency (SDA) in German and Italian by topic label and date and then merging them to build the "similarity thesaurus". German queries were then tested over a large collection of Italian documents. The results of this approach are promising, especially when used on a domain-specific collection [14].

A strong disadvantage of corpus-based techniques is that they tend to be very application dependent. New reference corpora are needed for new domains.

Summing-up: With the current-state-of-the-art, all the above approaches if implemented in a well-designed, tested and tuned system can be expected to achieve approximately 80% of monolingual effectiveness in the general domain. However, as can be seen from this brief overview, any single method for cross-language retrieval presents limitations. Whatever the method chosen, the resources used to provide the means for mapping between query and collection are a major factor towards successful retrieval. Already existing resources -- such as electronic bilingual dictionaries -- are normally inadequate for the purpose; the building of specific resources such as thesauri and training corpus is expensive and such resources are generally not fully reusable; a new multilingual application will require the construction of new resources or considerable work on the adaptation of previously built ones.

It should also be noted than most systems currently in use concentrate on pairs rather than multiples of languages. This is hardly surprising. The situation is far more complex when we attempt to achieve effective retrieval over a number of languages than over a single pair; it is necessary to study some kind of interlingual mechanism -- at a more or less conceptual level -- in order to permit multiple cross-language transfer. In a conceptual interlingua, terms and phrases from multiple languages which refer to the same concept are mapped into a language-independent scheme. In this way it is possible to match to equivalent terms in all languages and to achieve CLIR in any of the language combinations, not just pair-wise. However, the building of a such a resource is not an easy task and much work remains to be done before we can talk about truly multilingual retrieval systems.

4. Cross-Language System Evaluation Campaigns

System evaluation activities play an important role in stimulating system development. This is particularly true for cross-language retrieval systems which are still very much in the experimental stage. There are currently several international activities in this area.

- TREC - Text Retrieval Conference Series (http://trec.nist.gov/) includes a cross-language track this year for English and French to Arabic.
- CLEF – Cross language Evaluation Forum (http://www.clef-campaign.org/). CLEF sponsored by the European Commission as part of the DELOS Network of Excellence for Digital Libraries is an evaluation activity for European languages and represents the continuation of the CLIR track begun at TREC in 1997. CLEF 2001 has four tasks for multilingual, bilingual, domain-specific and monolingual (non-English) text retrieval evaluation. This year's multilingual document collection has comparable newspaper corpora for six languages (Dutch, English, French, German, Italian, Spanish) and topics in 10 European languages and 3 Asian ones.
- NTCIR: NACSIS Test Collection for Information Retrieval (http://www.rd.nacsis.ac.jp/) hosted by the National Institute for Informatics, Tokyo. NTCIR includes cross-language tasks for Chinese – English and Japanese – English.

These activities provide important forums for system developers to meet, exchange ideas and experiences and compare results. For the reports on the most recent research in the MLIA area, the reader is advised to refer to the latest proceedings of these initiatives [15],[16],[17].

8. Conclusions

We have given a very rapid overview of some of the issues that must be considered when building a system that provides access and retrieval functionality for document collections in multiple languages. Much progress has been made in this sector in recent years and substantial momentum has been built. Current efforts are focused in such areas as combining multiple sources of translational evidence to improve cross-language matching of queries and documents, multilingual access to so-called 'low-density' languages – those for which linguistic resources are not readily available in electronic form, multilingual access to multimedia content – particularly spoken documents, and presentation of results from multilingual searches – including summarization of content across multiple documents in different languages.

However, it is noticeable that although MLIA and CLIR research has made significant advances over the last few years, most real-world applications that handle documents in multiple languages still provide only very simple access tools, usually not going beyond a controlled vocabulary search on selected fields, and seldom for more than two languages. A recent survey at a meeting of European Digital Library projects sponsored by the European Commission confirmed that although most projects actually handled documents in several languages, very few of them had already implemented any tools to enable search over more than one language collection at a time. It is evident that a considerable effort is now needed to transfer the results achieved by the research world to the application community. We hope that our tutorial will be one step in this direction.

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UNIMARC Manual: Bibliographic Format Updated Edition and Future Developments

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1. Introduction

UNIMARC Manual: Bibliographic Format, 2nd edition published in 1994 was updated three times: in 1996, 1998 and 2000. The updates incorporate mainly additions of the groups of content designators for a particular type of material, additions to the format to assure its consistency with the development of other UNIMARC formats, mainly UNIMARC/Authorities, and corrections and additions of minor, but not less relevant, kind, like additions of code values, notes and explanations, as well as examples. Each update necessarily caters for errata and minor changes.

1st Update, 1996 introduced mainly content designators for antiquarian material, and 2nd Update, 1998 for electronic resources. The 3rd Update, 2000 introduced a broad range of content designators and coded values not linked to a particular type of material. These are: additional coded values and subfields for electronic resources and antiquarian material; new fields 016 ISRC (International Standard Recording Code), 035 Other Systems Control Numbers together with 886 Data Converted from Source Format; new subfield for Form Subdivision in 60- Subject Analysis Block fields together with the new field 608 Form, Genre or Physical Characteristics Heading. Also included is a new field 730 Name - Intellectual Responsibility for recoding the author's name which form does not follow any particular cataloguing rules with the aim to enable the mapping, primarily, between UNIMARC and Dublin Core metadata elements DC.Creator and DC.Contributor. The 3rd Update also contains new edition of appendices A: Language Codes, B: Country Codes, C: Relator Codes, H: Cataloguing Rules and Formats Codes, I: Table of Values, J: Character Sets, K: Documentation to Accompany Exchange Records, M: Bibliography and N: Useful Addresses.

2. 4th Update, 2002

The new update will be the result of the two year period during which new proposals were received either from the members of the PUC or UNIMARC users. This update will include:

- review of mandatory fields in a UNIMARC bibliographic record with specifying mandatory fields for certain types of records like records of text, cartographic material, electronic resources etc., as well as mandatory fields for records that are result of the retrospective conversion; there is also a change of status for some fields, e.g. the status of 304 Notes Pertaining to Title and Statement of Responsibility is changed to mandatory for records of electronic resources; the same applies to fields 856 Electronic Location and Access and 337 System Requirements Note;

- addition of coded values in coded data fields, e.g. DVD-Video in 115 Visual Projections, Videorecordings and Motion Pictures, electronic resource in 105 Textual Material, Illustration Codes;

- 856 $g URN subfield is made obsolete and the URNs is added to $u URL subfield for consistency with MARC21;

- addition of new subfield $c Locality (ISO) in 102 Place of Publication or Production to code the locality of publication in ISO 3166-2 standard, and subfield $2 Source of Non-ISO Code to record the source of the code used in the present subfield $b; lists of codes should be registered with the PUC and will be recorded in Appendix G;

- addition of new subfields in the field 327 Contents Note to record tables of contents of the item which are provided by vendors either as covers in image mode or the table of contents in text mode;

- addition of a subfield $3 Authority Record Number to 6-- classification fields for linking the field to the corresponding classification record; this corresponds to the $3 used elsewhere to link headings to authority records;

- addition of the new fields for headings for Trademark in 7-- Intellectual Responsibility Block and 60- Subject Headings: 716 and 616; due to the introduction of the new type of identity which does not come under the scope of intellectual responsibility as presently defined, redefinition of the name and definition of the 7-- block is made;

- revision of content designators for music: Christina Magliano will speak more on that later today;

- revision of relator codes for old prints, motion pictures, music etc.;

- addition of full record examples to Appendix L.

The direction of development across the borders of libraries' domain can be seen in adding to UNIMARC bibliographic format content designators of the two types. The first type includes new fields for standard numbers, note and codes for subject classification scheme for recording in bibliographic records information used in the book trade in order to facilitate reuse of data and to aid discovery. Alan Dunskin will speak more about that later today. The second type of content designators are new coded values in 116 Graphics and 117 Three Dimensional Artefacts and Motion Pictures together with revision of relationship fields in 4-- Linking Entry Block applying to all kind of historical and artistic material, present not only in libraries but also in archives, museums etc.

3. Pending Proposals

- additional subfields for 675 Universal Decimal Classification field due to the review process of the UNIMARC/Classification Format;

- new field 852 Location and Call Number to be updated for consistency with UNIMARC/Holdings Format; Rosa Galvao will speak about the development of this format later today;
- revision of Record Label and content designators for serials for consistency with the new edition of ISBD(CR) – Continuing Resources and ISSN Cataloguing Rules.

4. Future Developments

- promote mapping between Dublin Core and UNIMARC by pointing to best practices;

- promote implementation of ISO 23950 and Bath Profile standards which recognize UNIMARC as one of the carrier formats next to MARC21, Dublin Core and SUTRS;

- secure resources to negotiate the migration of UNIMARC formats from ISO 2709 to XML based exchange formats: this work should be carried out in conjunction with the booktrade and the MARC21 community;

- continue the study of UNIMARC and its further development in the context of the FRBR (Functional Requirements for Bibliographic Records) and FRANAR (Functional Requirements and Numbering for Authority Records);

- follow up developments of IFLA standards, as well as standardisation processes in related international organisations and bodies like ISO/TC46, ICA, IAML, ISSN, ISBN, MARBI, booktrade (ONIX), CERL etc.

Summary

Three updates of the UNIMARC Manual: Bibliographic Format, 2nd edition are briefly described. Follows description of the 4th Update to be published in 2002. Apart from the additions of new coded values, fields and subfields within the libraries' needs, a new direction of development towards the booktrade, and archives and museums domains is emphasized. Pending proposals are mentioned too.

Future developments are described: they follow developments of IFLA and other related bodies' standards in telecomunication and technology, and in booktrade.

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Introduction to the *UNIMARC Manual -Authorities Format*, 2nd Edition

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Abstract:

In March 2001, the UNIMARC Manual - Authorities Format, 2nd Edition was published by K.G. Saur on behalf of the IFLA UBCIM Programme. This edition replaced UNIMARC/Authorities: Universal Format for Authorities, published in 1991. The Permanent UNIMARC Committee initiated the production of a new edition to align UNIMARC with the recommendations of the IFLA Report, Mandatory Data Elements of Internationally Shared Resource Authority Records; in addition, it was recognised that after 10 years of practical use there were many other useful enhancements. This paper will describe these changes.

Introduction

In 1991 the *UNIMARC/Authorities: Universal Format for Authorities* was issued by IFLA UBCIM (a fact of which I was blissfully ignorant). Such was the demand for the title, that six years later stocks were starting to run low and the Permanent UNIMARC Committee decided it would be prudent to start work on a new edition. This was finally published earlier this year and the purpose of this presentation is to try and convey a flavour of the changes from the first edition and the reasoning behind them.

Why revise?

It is now ten years since UNIMARC Authorities was first published and it is perhaps not surprising that there should be a backlog of corrections, clarifications and desiderata. However, the second edition is much more than a mere updating. It has been expanded to accommodate two areas of environmental change. Firstly, the Internet, which was virtually unknown in 1991, has become central to many library operations; secondly exchange of authority data requires closer alignment between formats and more standardisation of data content. In this context the recommendations made by the IFLA Working Group on Minimal Level Authority Records and International MARC[i] were central. A third area in which the format has changed is in presentation; regrettably UNIMARC /A cannot be published as an "integrating resource", but the appearance of the manual has been brought into line with the bibliographic format. Whereas the first edition was a specification rather than a user's manual; the new edition is more cataloguer-friendly; e.g., each field is described on a separate page and more detailed usage notes are provided; definitions have been provided for all subfields and valid subfields are listed under each field, replacing the cross references in the previous edition. Unfortunately for reasons of economy, the full range of appendices containing code tables etc. could not be replicated in the authorities format, but Appendix L (Examples of complete records) has been expanded and Appendix O has been added, listing all the changes from the first edition.

Changes

I want to focus fist of all on an area of profound change: the explicit identification of script and language at heading level. Authority records traditionally contain data elements that identify the language and script of cataloguing and these are coded, at the record level, in the 100 field. However, MLAR , drawing on experience from Project AUTHOR[ii], identified the absence of any equivalent metadata for the heading as a barrier to exchange of authority data. MLAR recommended that it should be mandatory to identify language and script at this level. PUC has redefined the scope of control subfields $7 and $8, to facilitate this. This was achieved by increasing the number of character positions allotted to each subfield. The definitions of pre-existing character positions have not been changed. The new character positions define the script, character set and language of the heading and are valid in the 2--, 4--, 5-- and 7-- blocks. Under certain cataloguing rules ambiguity may remain, because elements of the heading are permitted to use the language of cataloguing not the language of the entity. In these cases "mul" is the appropriate value.

Other MLAR inspired changes are a range of new data elements and coded positions in the record leader and in the 1—to aid identification of the kind of record. It is possible to code the nationality and language of the entity described by the 2—heading. As I said earlier, another major influence has been the Internet; to enable remote resources to be accessed directly from the record, the 856 field has been adopted from MARC 21. This will enable cataloguers to point directly to reference material or other supporting documentation. In addition a new X16 field has been added to accommodate trademarks. New coding has been implemented to facilitate the distinction of form, genre and physical characteristics from topical subject terms. Although the format has changed significantly, the changes are additions or extensions, rather than amendments.

Conclusion

Whether this edition will have such a long shelf life as its predecessor is open to question. The pace of change is increasing and new challenges are constantly emerging. UNIMARC will continue to adapt to meet these challenges.

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[i] *Mandatory data elements for internationally shared resource authority records: report of the IFLA UBCIM Working Group on Minimal Level Authority Records and ISADN. IFLA UBCIM, 1998.*
http://www.ifla.org/VI/3/p1996-2/mlar.htm

[ii] *AUTHOR: transnational application of national name authority files: final report, June 1998.*
http://www.bl.uk/information/author.pdf

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UNIMARC HOLDINGS FORMAT: the state of the art

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The UNIMARC holdings format is being prepared by a Working Group appointed by the Permanent UNIMARC Committee (PUC) in fall 1999[1].

Developing a machine-readable format to lodge the holdings information of a bibliographic item has been an urgent need for a long time. The UNIMARC bibliographic format provides content designation only for data which is applicable to all copies of a work, the information which applies only to some copies or a single copy of a work had to be placed in data fields of block 9. Thus, it was necessary to develop a format which would enable to describe an information concerning the specific characteristics of a bibliographic unit or of a set of a bibliographic unit existing in a given institution.

A developing format had to have particular characteristics: i) to respect the general philosophy of UNIMARC; ii) to provide the effective means for the exchange of the records between the systems at the local or international level; iii) to promote consistency in the communication and exchange of holdings.
As far as the nature and the quantity of the information is concerned, it had to take account of: i) data and data elements which may allow search and retrieval in the library and union catalogues at local and international level (at the *The Bath Profile* release 1.1 two element set names are defined for use at level 1 – B-1: locations only, and B-2: locations, summary information and count if available[2] - as necessary to support holdings search and retrieval); ii) data and data elements which may lodge established practices in each country /institution and had to do with real demands of the information for the internal use of the

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[1] The working group consists of: Rosa Galvão (Biblioteca Nacional, Portugal) Chair; Liuba Buckienè (National Library of Lithuania; Sofia Klarin (Croatian Institute for Librarianship);Vladimir Skvortsov (National Library of Russia); Cristina Magliano (ICCU); Francoise Bourdon (Bibliothèque nationale de France) ; Brian Holt (retired, British Library)

[2] The Bath Group (2000, June). Bath Profile : an International Z39.50 Specification for Library Applications and Resource Discovery. Available:<http://www.nlc-bnc.ca/bath/bp-current.htm>

bibliographic processing services, on one side, and with the definition of opac holdings display, on the other. Within this ambit it had to take account of the information concerning a specific specimen of a particular bibliographic item, like owner entity, physical location, bibliographic history, physical caracteristics, among others, it had also to take account of the specific information about the organization of a particular holding, as well as the information necessary for the local processing, maintenance or preservation of the item.

The conceptual work of the first draft of the format was based on *BnF Holdings Format Version 1.0 January 1994*, a document produced by Bibliothèque nationale de France based on MARC 21.
Most of the work, both the first and the latter drafts, which are still being commented, was done by e-mail.

The structure of the format

The UNIMARC Holdings Format lays, as the bibliographic or Authority format, on three elements like the: record structure, content designation and data content.

As the other two formats, this one is devided in blocks with the following designations:

0 - - Identification block
1 - - Coded information block
2 - - Location and Access Block
3 - - Notes Block
4 - - Linking Entry Block
5 - - Holdings Statement Block
7 - - Intelectual Responsibility Block
8 - - International Use/Source Information use Block
9 - - National Use Block

Each block consists of fields and subfields. During the work, general choices had to be taken : i) the format should take account of monographs and serial publications; ii)at the beginning it would only describe briefly the holdings of the serial publications.

As far the data field structure is concerned, the following choices have been taken: i) in similar fields, character position or subfields with the information containing the same content[3], the information was kept with the same structure and/or codes; ii) in the notes block (3xx) and Linking Entry Block (4xx) only some few fields were produced to allow further growth if necessary.

The UNIMARC Holdings Format is not yet finished, it is in the draft form, which contains the structure with the information considered necessary for the description of a bibliographic holding. The format is going to be analysed, tested and commented so that the first version can be drafted.

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[3] For instance: 001 and 005 fields, 7 block, some fields of the 8 block and somecharacter position of the field 100.

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Format for Music: proposals and standardization of data for international exchange

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Italian Union Catalogue (Musica) holds about 400,000 records on musical documents from XVth to the XIXth century (131,326 manuscripts and 273,069 editions, 31,319 librettos)
This material belongs to more than 500 libraries, among them the most important italian musical libraries are to be found, for instance the Library of the Conservatorio Giuseppe Verdi in Milan, the Library of the Conservatorio S. Cecilia in Rome and the Library of the Conservatorio S. Pietro in Majella in Neaples; many of these records are related to material kept in ecclesiastical, public and private archives, while a smaller part is related to foreign libraries.

The core of the database was created by the project of the Ministry for Cultural Affairs "Sistema Beni Librari", which automated and merged the collective printed catalogues of the Ufficio Ricerca Fondi Musicali (URFM), in Milan and of the Istituto di Bibliografia Musicale (IBIMUS) in Rome.
In November 1995 a new project of the Istituto Centrale per il Catalogo Unico e le Informazioni Bibliografiche (ICCU) has started and in two years it will double the contents of the database and perfect the its functions in order to improve the managment and the updating of the musical catalogue.
The aim of the ICCU project is to transform the MUSICA database into a "national virtual library of Music", thus ICCU would use this tool to organize and improve innovative quality services, meant for specialized users but as well available to any end-user who is interested in the cultural musical heritage kept in the italian libraries.
Since 1996 a new database has been created for this purpose:consultation based on the information retrieval criteria, and includes diversificated means of searching OPAC SBN is conform to the following international standars:

- UNIMARC with some national field for the data, for the loading of the catalogue and for the downloading of the databases;
- SR/Z39.50 for the access to the catalogue.

These proposals are the outcome of several working meetings held since 1999 among representatives of the following projects and institutions:

- SBN-musica (ICCU, Ufficio Ricerca Fondi Musicali di Milano, Biblioteca del Conservatorio di Milano)
- ADMV (Archivio Digitalizzato della Musica Veneta) (Biblioteca Marciana di Venezia, Biblioteca Nazionale Universitaria di Torino, Discoteca di Stato di Roma)
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The analysis of the Unimarc format of the D/B SBN-musica and of the proposals presented in the project ADMV have pointed out the opportunity of data exchange with other databases at the international level.

The first new field suggested concerns the coding of the musical incipit (new field **136: Music incipit**). The proposal intends to describe the first measures of music and if necessary the first words of text of the musical compositions, according to the rules mostly adopted in cataloguing music manuscripts and often essential to identify a musical composition. Subfields provided define the coded movement, its form, the instrument or voice whose musical incipit is coded and the music itself. The possible encoding systems are the Plaine & easie code and the DARMS code, normally used in the international environment. The first draft of the new tag has been discussed at the PUC Meeting in Vilnius and also by the Italian member of the Unimarc music Subgroup, in several working meetings at the international level, within RISM (London, 4 august 2000 and Paris, 9 february 2001) and the Unimarc working group of IAML (Edinburgh, 7 and 10 august 2000). The compatibility of the format used by Rism and the Cambridge University Library (using Ukmarc) has been evaluated. The most used alphanumeric code for the transcription of the notes, the Plaine & Easie code has been normally adopted to code the music incipit, but the recent analysis of its documentation has revealed lack of published sources and inconsistencies in its uniform use. There is need of further study by the international community, in particular within IAML; in fact in the last meeting in Périgueux, 8-13 july 2001 has been revised the PEC and now the new version is on the Italian site: http://www.cilea.it/music/lezioni/plaineeasycode.htm. The new version of the code will be published in the periodical of the IAML" Fontes Artis Musicae"

The other proposal is to modify the field **128, Coded data field: Music performance and scores** that has always been object of criticism because of its lack of precision. A complete revision is proposed, splitting it into two fields: **128, Form / genre of composition** with the cut of the subfields $b and $c and the implementation of a subfield $d for key or mode, and **145: Medium of performance** with the adoption of new codes defining the instruments and voices.

The codes for the field 128 $a have been compared with those used by the Comité Français Unimarc and the Music Dept. National Library of Lithuania; analogies and anomalies have been found, due not only to the language but also to the fact that the same codes have been used with totally or partially different meanings. Codes for musical genre (such as instrumental music or chamber music) have been proposed, extending the content of the field. The Italian practice uses many more codes than the others, and in conclusion a common mapping work should be desirable. It is working to produce a unique and shared list.
The field 144 has been compared with the scheme used by IRCAM and Cité de la musique to verify its compatibility. The new proposal is extremely complex but seems able to guarantee the compatibility and particularly the need to indicate the medium of performance both at a synthetic level (i.e. indicating vocal and instrumental ensembles) and at an analytical level (i.e. indicating all the single instruments and/or voices).

For the manuscript music has been proposed a new field **(144 Coded data field: Manuscrip Music-Phisical Attributes):** this field should contain coded data relating to the physical form of music manuscripts. It is recommended that it is always present in records of music manuscripts. The contents of the coded data are:

Subfield $a fixed-length data elements:

Name of Data Element	Number of Characters	Character Positions
Autograph indicator	1	0
Kind of material	1	1
Composite indicator	1	2
Number of elements	3	3-5
Palimpsest indicator	1	6
State of preservation	1	7

Another implementation in the format concerns the adoption of a new field (**621, Performance data entry**), modelled on the field 620, but specific for place, date and other information regarding the performance. This field is relevant both for live performances or sound/video recordings, and librettos or music manuscripts where its use is frequent if not constant and is of great importance for searching. In case a specific field should be considered unnecessary, these data might be included in the field 620, appropriately modified.

The other proposals are a revision of the existent fields or coded data to increase the range of application to the music manuscripts, in details:

- **Relator code**: *Annotator.* Has been suggested to extend the present definition for the manuscrip annotator
- add some codes in the subfield 125 $a/0 Format of Printed/*Manuscript* Music to match more formats used mainly in manuscript music. The field is used in music scores, printed and manuscript and in music audio or video recordings.
- adapt the field **210, Publication, distribution, etc.** in its definitions to fit manuscripts, i.e. including also place and date of writing and name of copyst or scriptorium.

These are the first proposals to conform the format for music data. The Italian proposals for Music coded data implementation should be discuss at the next PUC meeting and we hope that all the matter can be approve. Certainly it will be necessary to integrate these with the data for the composition (Uniform title) regarding music manuscripts and liturgical manuscripts and publications. The Italian subgroup is coming to analyse also this problem.

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UNIMARC *Guideline no. 6*: Electronic Resources

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Abstract:

This paper will provide an overview of UNIMARC Guideline no. 6: Electronic Resources. The Guideline shows how the UNIMARC format is to be used when creating bibliographic records for electronic resources. Several aspects of describing electronic resources using UNIMARC format will be discussed.

IFLA UBICIM publishes a series of guidelines on using UNIMARC for different types of materials. The purpose of the guidelines is to facilitate the creation of bibliographic records by specifying the general model for encoding UNIMARC records for specific type of material, providing data elements and UNIMARC location, and full record examples. The first guideline in the Guideline series was a draft version of the *UNIMARC Guideline no. 3* for computer files issued in June 1995 (1995-06-23). The guideline complied with *International Standard Bibliographic Description for Computer Files - ISBD(CF)* or more specifically with *UNIMARC Manual: Bibliographic Format*, 2nd ed. (1994) which provided fields for recording computer files as provisional. *ISBD(CF)* published in 1990 was replaced in 1997 with it's revised edition under the title *International Standard Bibliographic Description for Electronic Resources - ISBD(ER)*. To assure conformity to the *ISBD(ER)* in terminology and description of fields for the use of electronic resources *UNIMARC Manual*, Update 2 of the 2nd ed. published in March 1998, contains redefinition of the provisional fields. The first print version of the *UNIMARC guideline no. 6: Electronic resources* published in 1999 (1999-09-01) resulted from meetings of the IFLA Permanent UNIMARC Committee during which data elements used to describe electronic resources were compiled and their location in UNIMARC was determined. The revised electronic version of *the Guideline* posted on the IFLANET in 2000 (2000-08-22) (http://www.ifla.org/VI/3/p1996-1/guid6.htm) includes changes dictated by comments and requests from the users. As a result of the revision of the UNIMARC Manual Update 3 it also contains changes of the expanded UNIMARC field 135 Coded Data Field: Electronic Resources (e.g. codes for master files) and the field 856 Electronic Location and Access (e.g. subfields $e, $j, $u, and $x).

UNIMARC Guideline for electronic resources shows how the UNIMARC format is to be used when creating records for electronic resources. *The Guideline* gives instructions as to what is important to consider while cataloguing/creating bibliographic description for an electronic resource using UNIMARC format, and which tags require special attention.

1. Types of electronic resources (data, programs, and/or their combination)

Tag 135 Coded data field: Electronic resources should correspond with text expression in tag 230 Material specific Area: Electronic Resources Characteristics.

2. Access (remotely accessed vs. locally accessed resources)

Electronic resources are treated in two different ways depending on whether access is local or remote. There are certain differences in use of the following fields:

Locally accessed electronic resources	Remotely accessed electronic resources
135 Coded data field: Electronic resources **215 Physical Description** 230 Material Specific Area: Electronic Resources Characteristics **304 Notes Pertaining to Title** and Statement of Responsibility 336 Type of Electronic Resource Note **337 System Requirements Note** 856 Electronic Location and Access	**135 Coded data field: Electronic resources** ~~215~~ **230 Material Specific Area: Electronic Resources Characteristics** **304 Notes Pertaining to Title** and Statement of Responsibility 336 Type of Electronic Resource Note 337 System Requirements Note **856 Electronic Location and Access**

3. Electronic resources which share characteristics of another form (medium)

According to ISBD(ER) *The Guidelines* gives two options for cataloguing these resources: A) In the bibliographic description the item is treated primarily as an electronic resource (the record has code "l" in the Record Label, Type of Record character position 6); fields relevant to other types of materials are added. B) The bibliographic description is based on the specific type of material (the Record Label, Type of Record has the value of the type of material described); fields relevant to electronic resource are added.

4. Electronic resources available in different types of carriers, presented in multiple formats and structures

There are two possible options to describe these resources: A) All carriers may be described in the same bibliographic record: grouped in the subfield 215 $a or with each carrier occupying a repeatable field 215 ; B) Each different physical carrier may be described in separate bibliographic records (both records can be linked with field 452 Edition in a Different Medium).
The revised edition of the Guideline for electronic resources also contains 21 examples of both locally and remotely accessed resources.

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Closing the Circle: Automated Authority Control and the Multiscript YIVO Catalog

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Abstract:
The author/title card catalog and the authority file of the YIVO Institute for Jewish Research are used to illustrate multilingual and multiscript issues in automated authority control

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This paper is called "closing the circle" because the ability to handle multiple languages and scripts in authority records is the last open issue in automated cataloging systems. To illustrate the issue, we use the multilingual, multiscript card catalog of the library of the YIVO Institute for Jewish Research (New York, U.S.A.). YIVO is the world center for Yiddish, a European language normally written in Hebrew script. Dr. Weinberg enhanced the catalog which we describe and designed the multiscript authority file.

Structure of YIVO's author/title catalog

YIVO's catalog is divided into author/title and subject. The author/title catalog is not in a single A-Z sequence (the usual practice in the U.S.), but is subdivided by script and language: Yiddish, Hebrew, Latin script, and Cyrillic script. The location in the author/title catalog of a particular bibliographic record depends on the language and script of the publication. For example, works written in Yiddish and translations into Yiddish are in the Yiddish section.

When works by an author appear in more than one language/script section, all the authorized forms for the author used in the catalog are shown on a special cross-reference card (which was designed by Dr. Weinberg). In each section where the author's works appear, the cross-reference card is filed immediately before the entries under the author's name. These cross-reference cards are included in YIVO's published Yiddish catalog.[1]

Sources of authority for YIVO cataloging

Entries for the Latin-script section are created according to the Anglo-American Cataloguing Rules.[2] Entries for the Yiddish, Hebrew, and Cyrillic-script sections are created according to AACR principles as well, primarily, the best-known form of the best-known name. For its Hebrew headings, YIVO does not follow the Israeli use of classic Hebrew spelling, but does unify the orthography of surnames in selected cases.

The YIVO authority file

A name heading in a particular language/script is established only as needed; that is, the principle of literary warrant is applied. An author who uses multiple languages, or who is widely translated, may appear in all four sections of the author/title catalog under four different established forms, each subject to authority control. The linkages between the established forms on the cross-reference cards are traced in the YIVO authority file.

YIVO's multilingual, multiscript catalog is a useful model when we consider questions about the structure and content of automated multiscript authority files.

Language or script?

Preferred name headings are established in the context of a particular language. The set of rules, the "source of authority," which determines the content of an authority file, has an implied language. AACR specifies a preference for English under certain circumstances. When AACR is used in the context of another language (either directly or as an authorized translation), the "working language" is preferred to English (AACR2 Rule 0.12). We see this in the YIVO catalog: the entries in the Yiddish, Hebrew, and pan-Cyrillic sections are based on AACR principles.

The YIVO catalog, with Yiddish and Hebrew sections, each with authorized forms, demonstrates that authority files cannot be script-based. Most scripts are used to write more than one language. When a particular entity has different names written in various languages which use the same script, we must choose among the various forms of name. For example, English is the predominant Latin-script language for YIVO's clientele; the English form is preferred for the Latin-script catalog when AACR mandates a language preference.

Single or multiple records?

Should preferred forms in different languages be in a single record? The MARC 21 Authority Format allows for only one source of authority for a name or subject per record. Furthermore, a record containing multiple syndetic structures would be more complicated to implement and use. Multilingual authority control should be supported by multiple authority files, each one oriented to a specific source of authority.

To allow retrieval, despite different names imposed by various sources of authority, we must connect preferred forms to each other. In other words, relate all the authorized forms for the entity that is being named.

Should data elements within an authority record be cross-linked?

Many-to-one data relationships can occur in authority records. For this reason, both authors have independently argued against parallel 1:1 linkage in multiscript authority records.[3] [4]
Multiple authorized forms in a single language?

For a language written with ideographs, an alternative writing system exists to show the pronunciation.

Language	Ideographic form	Pronunciation
Chinese	In *hanzi*	In *pinyin*
Japanese	In *kanji*	In *katakana*
Korean	In *hanja*	In *hangul*

So there may be two authorized alternatives for an East Asian name: the ideographic form, and the "pronunciation" form.

Names that are different when written in ideographs may have the same pronunciation. So identical "pronunciation" forms could appear in different records in the authority file. Should these be qualified to ensure their uniqueness? Or should they be differentiated through explicit reference to the ideographic form (e.g., treat the ideographic form as primary, and identify the "pronunciation" form by a distinctive tag)?

In conclusion

The YIVO catalog has met the needs of users who require coherent access in the languages and scripts of the collection. The challenge facing the developers of library systems is to provide similar services in an automated environment, including other language needs which are not seen in the YIVO catalog.

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Mapping UNIMARC data to the RLG/CERL Hand Press Books database

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Abstract:

The experience of the Research Libraries Group, Inc. (RLG) and Consortium of European Research Libraries (CERL) with round trip conversion of UNIMARC data to a MARC 21-based format shows that there are considerable difficulties in such a conversion. However, various techniques can be used to deal quite successfully with the incompatibilities of those two formats.

Since 1997 the Research Libraries Group, Inc. (RLG) has provided its users with a database of bibliographic records for hand press books (HPB) published up to 1850. The database is produced through an agreement with the Consortium of European Research Libraries (CERL). The CERL Executive Office oversees the process of getting records for hand press materials from its members and sending them to RLG for processing and loading to the Hand Press Books database.

Until very recently, RLG's databases have been comprised solely of RLIN MARC elements, which are basically the same as MARC 21 (formerly USMARC), with a few additions. However, most of the records that CERL supplies to RLG for the HPB database use UNIMARC format. Ideally RLG's HPB database would have been based on a set of MARC elements that could accommodate UNIMARC easily, as well as the other types of MARC format data that CERL sends to RLG (IBERMARC, UKMARC, etc.). However, the costs associated with creating such a database were too high for RLG and CERL. Instead all data that CERL contributes to the HPB database must be translated to RLIN MARC format.

There is also a flow of records out of the HPB database. CERL has recently developed UNIMARC export capabilities from HPB through work with RLG to specify an RLIN MARC to UNIMARC conversion, and through work with Crossnet, Inc., to develop a Z39.50-based conversion application. Thus CERL and RLG have experience in round trip mapping of UNIMARC data to and from RLIN MARC.

From the start CERL was aware of the problems associated with converting UNIMARC data to a MARC 21-based format. CERL's objective was to be able to retrieve an UNIMARC format record from the HPB database with no loss of the data that had been in the UNIMARC record sent to RLG. CERL and RLG quickly realized the difficulty of achieving this goal because of the incompatibilities between UNIMARC and RLIN MARC. In a few cases, one format defines an element that the other format lacks (e.g., the UNIMARC 503 has no RLIN MARC equivalent). Often, however, the two formats both define the same element, but the details differ (indicator values, subfields, coded values).

CERL and RLG use several techniques to cope with incompatibilities. UNIMARC defines a couple of dozen extended Latin script characters that are not in RLG's character set definitions. CERL defined surrogates for those UNIMARC characters (e.g., \IJ\\ stands for the Capital Letter IJ character in ISO 5426). The few UNIMARC fields with no RLIN MARC equivalent, such as the UNIMARC 503, are converted to RLIN MARC 886. This completely preserves the source data.

As just mentioned, many UNIMARC fields are similar to RLIN MARC ones, but not enough to allow complete conversion. RLG also uses the RLIN MARC 886 for any UNIMARC field of that type, but in addition, it is also converted to the most appropriate RLIN MARC field(s). For example, the UNIMARC 303 is translated to the RLIN MARC 500 as well as the 886. This allows the RLIN HPB record to retain the source UNIMARC data in a functional way, because the RLIN MARC 886 is not treated by RLG as an indexable or displayable element. This "double conversion" technique can be used to cope with any UNIMARC/RLIN MARC incompatibility when a significant number of UNIMARC subfields or coded values for a particular UNIMARC field lack RLIN equivalents.

The disadvantage of the double conversion technique is that redundant data occurs in an HPB record. The RLIN MARC 886 data permits complete reversibility of the UNIMARC source data supplied to RLG. However, that same data, or some portion, is also present in the HPB record in some other RLIN MARC field. It would be extremely difficult to write an export program with the necessary rules to automatically remove the redundant data. At this time, the record recipient must manually remove redundant data.

RLG and CERL's experience with round trip conversion of UNIMARC data to a MARC 21-based format shows that although there are considerable difficulties in such a conversion, various techniques can be used to deal quite successfully with the incompatibilities of those two formats.

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OCLC's UNIMARC/MARC 21 Conversion

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Abstract:

OCLC's involvement with UNIMARC/Bibliographic is outlined briefly, beginning with the February 1995 decision to pursue international growth, through the development of UNIMARC and MARC 21 conversion utilities during 1995 and 1996, and implementation in various phases between March 1997 and early 1998. Some major conceptual and practical differences between UNIMARC and MARC 21 are also mentioned.

OCLC's involvement with UNIMARC/Bibliographic stems from two circumstances that converged in February 1995. The OCLC Board of Trustees decided to pursue OCLC's international growth through a number of product enhancements, including the development of a UNIMARC capability. And OCLC entered into an agreement with the National Library of the Czech Republic to load UNIMARC bibliographic records from the Czech National Bibliography into WorldCat, the OCLC Online Union Catalog.

After examining existing utilities to convert records between UNIMARC and USMARC (now known as MARC 21), OCLC decided to build its own conversion software. The project began in May of 1995 to write specifications for the two-way conversion, translate these requirements into a software utility, and finally to fold the utility into four phases of OCLC services: UNIMARC output through OCLC Export; UNIMARC output through OCLC-MARC subscription and tape services; UNIMARC Batchload capability for WorldCat; and UNIMARC output from the OCLC CatME for Windows system and other micro cataloging products.

Because UNIMARC developed from a significantly different perspective than MARC 21, virtually every field and most subfields within each field had to undergo conversion. This includes character set and code list translations, re-designation of tags, subfield reassignments, indicator modifications, and in numerous cases, manipulation of data within certain fields and subfields. Furthermore, several conceptual differences between UNIMARC and MARC 21 proved to be challenges. UNIMARC de-emphasizes the notion of "main entry" by placing all intellectual responsibility in its 7-- area, whereas MARC 21 explicitly separates main entries into the 1XX area, for instance. UNIMARC raises Family Name entries to a status equivalent to that of personal, corporate, and uniform title headings, whereas in both AACR2 and MARC 21, family name headings are rare except as subject entries, and are designated by an indicator in the Personal Name fields. MARC 21 makes more extensive use of general notes designated as 500 fields, where UNIMARC divides its "general" notes into over a dozen different fields corresponding to other areas of the bibliographic record.

At the same time, OCLC tried to make its application as general as possible, keeping in mind the wide latitude UNIMARC allows for individual implementations. To that end, UNIMARC team members met with representatives of three European national libraries during the course of development to get a taste of how the format was actually implemented in real situations. This allowed us to grapple with such questions as data loss, local variations among implementations of the same UNIMARC standard, practices that are supported in one format and not the other (most notably, embedded fields and certain forms of record linking), and the impact of different cataloging rules on individual implementations of UNIMARC.

Subfield-by-subfield draft specifications for the conversion in both directions between UNIMARC and MARC 21 were begun in June 1995 and completed in January 1996. At that time, programmers began coding and testing the UNIMARC to MARC 21 conversion. That effort was substantially completed in July 1996 when OCLC sent a file of converted records to the National Library of the Czech Republic for their judgment. From that time through March 1997, OCLC fine-tuned the software through testing with UNIMARC records from the Czech National Library as well as data from a number of other European UNIMARC implementations. The first converted Czech records were loaded into WorldCat in March 1997. The UNIMARC capability was made available in OCLC Export in late March 1997. Late in calendar 1997, we made available the option of receiving UNIMARC records via the OCLC-MARC Subscription Service. When the new OCLC Cataloging Micro Enhancer for Windows (OCLC CatME) software was released early in 1998, it included a UNIMARC export capability.

Although specifications have been written for many of the changes that have resulted from the three UNIMARC Updates published in 1996, 1998, and 2000, as well as MARC 21 changes during the same period, these have not yet been implemented by OCLC. OCLC does not currently have plans to support the UNIMARC/Authorities, UNIMARC/Classification, or UNIMARC/Holdings formats. Because of our current global strategy, however, it is reasonable to expect that UNIMARC will play an increasing part in OCLC's future thinking and planning.

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ONIX, a New Product Information Standard

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The book trade does not have a good record of supplying accurate, timely and rich bibliographic data to libraries and booksellers. Indeed, there has never been a trade standard for product information to compare with MARC, which is not itself well suited to trade requirements.

This is now changing dramatically. Driven largely by Internet booksellers who want "richer" information, the book world is moving beyond the transmission of purely bibliographic data. Such rich data can include descriptions, abstracts, tables of contents, reviews, jacket images and general promotional information. The usefulness of such data is not, however, restricted to the trade. Both acquisition librarians and library users want this type of information. It has been suggested that OPACs could benefit from some of the information that their users commonly see on the Internet bookselling sites.

ONIX is an international standard for communicating rich metadata about books and other material dealt with by libraries and the book trade. Its guidelines comprise content specification, data elements, tags and code lists and an XML DTD.

ONIX includes:

- Comprehensive bibliographic detail
- Text: descriptions, reviews, author biographies, extracts
- Images: jackets, thumbnails, author photos
- Audio and video, website links
- Territorial rights
- Prices and availability in different markets
- Promotional campaign information

It is primarily intended for communication, but is also acting as an in-house database design blueprint for publishers, intermediaries and others. ONIX has drawn heavily from IFLA's Functional Requirements for Bibliographic Records, EDItEUR's Product Information Communication Standards (EPICS) and the work of the <indecs> Project, all of which were concerned with establishing sound models for metadata in an electronic environment.

ONIX is the outcome of a collaboration between EDItEUR (the international body for e-commerce standards in books, serials and epublications), the Association of American Publishers (AAP) and the Book Industry Study Group (BISG) in the United States and Book Industry Communication (BIC) in the United Kingdom.

Already becoming widely adopted by the book trade In the US and UK ONIX is now being implemented in Latin America, France and Germany with the book trades of many other countries committing to implement it. The International ISBN agencies are also planning to adopt an ONIX subset as core metadata for ISBN assignment and the International DOI Foundation is basing its own core metadata requirements on it.

There has also been considerable interest in ONIX from the Library sector. The British Library has mapped ONIX to UNIMARC and the Library of Congress has mapped it to MARC21. A study has been carried out in the UK, funded by the BNB Research Fund, on the feasibility of using ONIX International as a standard for bibliographic data transmission between the book trade and libraries. ONIX is also being investigated as a format for electronic CIP submission from publishers to National Libraries. Libraries are well represented on both the US and UK ONIX groups and there is considerable excitement at the prospect of a continuum of bibliographic information in standard formats throughout the supply chain.

ONIX is developed and maintained by EDItEUR, guided by the EDItEUR/ ONIX International Steering Committee which oversees policy and priorities and has representation from BISG, BIC and representatives from other national and regional groups. An ONIX support team is responsible for technical development and documentation and EDItEUR maintains a listserv which is open to all users or intending users.

ONIX started life as a traditional book-centred standard but is now developing in a number of directions. The new release 1.3, to be published in June, will be a true multimedia product standard with the potential to include not only e-books but also video and recorded music.

There is also considerable demand for ONIX for serials, providing for structured multi-level bibliographic information that can be used as rich catalogue data, enable despatch, check in and alerting services and improve management of library holdings. Work is well advanced and there should be some pilot implementations of ONIX for serials during this calendar year.

In summary, ONIX is a standard that can increase and enhance the flow of bibliographic and other product information throughout the supply chain. It is also a great opportunity for collaboration between the trade and library sectors. Anyone interested should take a look at the guidelines on ***http://www.editeur.org/onix.html*** and contribute to the discussion on the e-group at ***http://groups.yahoo.com/group/ONIX_IMPLEMENT***

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UNIMARC, ONIX and the future

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Abstract:

This paper considers whether in order to achieve a "bibliographic continuum" the book trade and the library community can benefit from exchange of product metadata. It considers the potential of the ONIX metadata set for libraries.

Introduction

Brian Green has described how ONIX evolved and how it is being implemented by the booktrade. I want to turn to the opportunities and possibilities that ONIX represents for libraries. I will focus on the interchange of product metadata between the book trade and libraries, the so-called "bibliographic continuum", considering along the way, the main barriers to interchange and the work which may surmount them. I will also briefly summarise my work on mapping ONIX to UNIMARC.

The Bibliographic Continuum

Although the business objectives and requirements of the booktrade and the library community differ, they have in common the requirement to accurately describe and locate documents. Each community would benefit from the facility to reuse the others' data. For the library community, provisional bibliographic records provide valuable information for selection and acquisition functions and can reduce cataloguing costs. For the publishing industry, the expression of bibliographic relationships and the provision of authoritative name and subject data improve discovery, resulting in additional business. The idea of the bibliographic continuum has been around for a long time without being fully realised. This is not to denigrate successful programmes, such as Cataloguing in Publication or CORC and projects such as Biblink

ONIX v MARC

Ironically, a major obstacle to exchange of product metadata is the exchange format. As Brian explained, the book trade has habitually used proprietary formats rather than MARC, as a result libraries tend to rely on intermediaries to convert publisher information to MARC. Conversion routines as we all know generally change data and are expensive and difficult to maintain. The arrival of ONIX has at least provided a single standard for the book trade, with the potential to reduce conversion costs. Last Summer I was asked to compare ONIX and UNIMARC and write a crosswalk.

I created a spreadsheet in which each element or code in ONIX 1.1 was mapped to the equivalent UNIMARC code. This work has been published on the Editeur Website and formed the basis for the ONIX/MARC 21 mapping carried out by OCLC, which can be viewed on the LC website. I was unable to carry out extensive testing of the mappings (in any case I only had access to two ONIX records); however by applying the mapping I was able to turn the ONIX data into recognisable UNIMARC records. However although ONIX offers a rich metadata dictionary, capable of describing printed and e-books and CDs etc; it does not yet support serials. Work is underway to remedy this, but clearly it restricts the value of ONIX to libraries. It did not prove possible to map UNIMARC data back into ONIX; certainly a round trip conversion will never be possible. However it would be possible to enhance ONIX records with limited parcels of information, in particular subject data. The Interparty project will look at how ONIX might be extended to accommodate authority data.

Content

Limited capability to exchange data is all very well, but the bibliographic continuum is an economic argument and savings will only be achieved if the data exchanged is reusable. ONIX forces some data elements into forms that libraries can use, or at least flags that data needs to be reviewed, but as Priscilla Caplan has highlighted this does not compensate for the absence of common content standards. While it is even less likely that publishers will adopt AACR2 or ISBD than MARC, both communities would benefit from reviewing their prejudices and discussing how content could be aligned. In the UK, the BNB Research Fund has funded a survey along these lines, asking librarians to consider what they find useful (or otherwise) in potential requirements records.

Conclusion

ONIX is not yet a viable successor to UNIMARC, but once stable could act as a conduit for exchange of data. However to get the maximum benefit from this we should question our own cataloguing practices: are we doing things because that's how they have always been done? If so, we should be prepared change our policies to take advantage of the metadata being created by the booktrade; then our cataloguers will be able to focus on providing the authority control, collocation, classification and indexing which make library catalogues superior to the dot com browsers.

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Mobile Libraries in the Scandinavian Countries: Development in View of Legislation and Financial Support

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Abstract:

A year ago Stately grants, earmarked to cover 50% of operational costs and purchases of mobile libraries in Norway, was proposed to be canceled. An intense lobby resulted in a transfer of operational costs to block grants. Grants towards the purchase of mobile libraries in Norway, no longer exists. The paper discusses if it is possible during economically hard times to maintain and even expand the mobile library services. Are mobile libraries a good- intentional phenomenon, that should be the first to go when the rain sets in? Or is this kind of service so valuable - on its own terms - that its will survive even fundamental changes within the financial and political framework? By looking into the history of Scandinavian mobile libraries to see what impact library legislation and financing has had on the development (and decline) of the mobile library services it is possible to find some answers.

A year ago people working within the field of mobile libraries in Norway received a shock. Stately grants, earmarked to cover 50% of operational costs and purchases, was proposed to be canceled. An intense lobby resulted in a transfer of operational costs to block grants, money that local authorities may choose to spend any way they want. Grants towards the purchase of mobile libraries in Norway, no longer exists.

Introduction

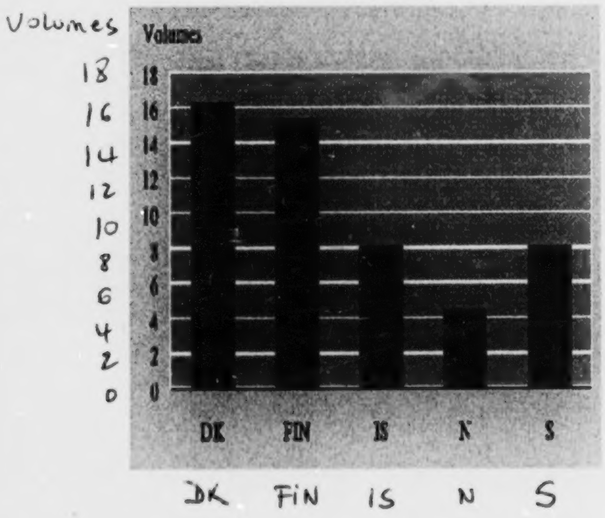
As far as library facilities are concerned, Norway is the least developed of the Scandinavian countries. Norway has the lowest book-lending rate per capita; a great many library employees lack professional qualifications; library premises are often inadequate for its purpose. Not surprisingly, in view of this slightly bleak picture, mobile libraries are scarce in comparison with neighboring countries. Norway has the highest number of library units, many of them are small branch libraries, accessible only a few hours a week and with a poor media collection.

Norway's librarians cast envious glances towards their neighbors, who have achieved a lot within library development that Norwegians most certainly would like to emulate:

Structurally **Finland** and Norway have much in common. Both are big but scarcely populated countries, and both have experienced rapid economic growth within a very short time span. Thanks to Finnish governmental priorities, a string of spectacular public libraries - as a rule designed by supreme architects - have been built. A great many local authorities run a mobile library service.

By Scandinavian standard **Denmark** is a small, densely populated country. The Danish public library service, one of the best in Europe, is an example to Norwegians. **Sweden** is a closer match as far as national venture is concerned, even though the Swedes as well can boast higher book-lending figures than Norway.

Public library volumes lent per inhabitant. 1997



Libraries and volumes. 1997

	Number of Libraries	Stock of volumes	Volumes lent
DK	250	34454000	85880000
FIN	992	36831532	81010999
IS	173	2081672	2076768
N	1108	20508000	18810000
S	288	43659000	72345000

Fig. 1: Nordic countries in figures 1999

It may come as a surprise, considering Norway's booming oil economy - to a great extent controlled by the State government - that Norwegian local finances are rather strained. The very same State government leaves an increasing amount of tasks to be solved on a local level, while the financial means to do so regularly fail to materialize. It goes without saying that local politicians have a hard time sorting out their priorities. The library services are forced to take part in an ever tougher infighting over tax-payer's money, being constantly challenged by natural heavy-weights like School and Health.

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This State government of affairs is not new. The development of a public library system has always been vulnerable to the ups an downs of community's finances, and to its legislative restrictions. The public library concept is more easily acclaimed when economy is booming, than when it's on the slide. At the same time Norwegian public libraries are by no means exempt from modern demands of better equipment, increased accessibility, and a generally faster adjustment to a braver and newer world.

The questions we are faced with are these: During hard timed ... is it possible - yes, indeed right - to maintain and even expand the mobile library services? Shouldn't a pious librarian be thankful, if it were possible to maintain a well run main library and a few rudimentary branches? Are mobile libraries a good-intentional phenomenon, the type that should be the first to go when the rain sets in? Without heavy public subsidies - is a mobile library like a tortoise turned upside down ? Or is this kind of service so valuable - on its own terms - that its independence should be bolstered, enabling it to survive even fundamental changes within the financial and political framework? To answer these questions, I have looked into the history of Scandinavian mobile libraries to see what impact library legislation and financing has had on the development (and decline) of the mobile library services.

During my studies it has become apparent to me that a number of factors are playing a part. Therefore, my presentation will have to be rather simplified. Even then I'd try to draw some conclusions concerning the possibilities of maintaining mobile libraries, in a society where this service not only has to compete with the politicians's concern for schools and care for the elderly. Other contestants are the demands of up-to-date main libraries.

Public administration

Norway, **Sweden** and **Denmark** have three levels of public administration. The governments draw their power from democratically elected parliaments (Ting). The countries are divided into a number of counties, who in their turn are divided into local authorities. Both the counties and the local authorities are run by political institutions. **Finland** deviates from this system: On a regional level there is no elected instrument of power. Sweden is about to change their system.

In all four countries we find a system of regional/county libraries. The regional library system in Finland and some Swedish, stands on a different legal and economic footing than the others. But in all Scandinavia the regional or county libraries have their task in common: a supportive and consultative role versus local libraries. The existence of a regional/county library is legally certified. In most cases this function is entrusted to the public library in the regional capital or another big public library.

Local public libraries are financed from tax revenues. Public libraries are run by the local authorities, who also determine the extent of services provided. In Norway many mobile libraries are owned and run by the regional libraries. In Sweden, Denmark and Finland most busses are owned and run by local authorities.

In all the countries local authorities are autonomous political bodies. Especially in Norway and Finland keeping the rural districts populated is considered a national task. These parts receive governmental subsidies to maintain their infrastructure and services. Nowadays, this kind of treatment is accepted and expected by most people.

All countries have a library act (Denmark from 1920; Finland from 1928; Norway from1935; Sweden between 1905 and 1964 and then again from 1997) with the requirement of a compulsory public library service. Lending free of charge is generally established.

In the beginning of the 1990s all the Scandinavian countries went through an economic depression. The crisis had its greates impact in Finland. In spite of being one of the wealthiest countries in the world, with a very high standard of living, Finland suffered from its trade agreements an generally close economic ties with the crumbling Soviets

Development in view of legislation and financial support

The chart below shows that the development of mobile libraries in Scandinavian countries, in spite of their both fundamental and superficial similarities, has taken quite different courses. The size of the countries seems to have no apparent relevance. Answers to the differences must rather be found in varying political attitudes and library legislation.

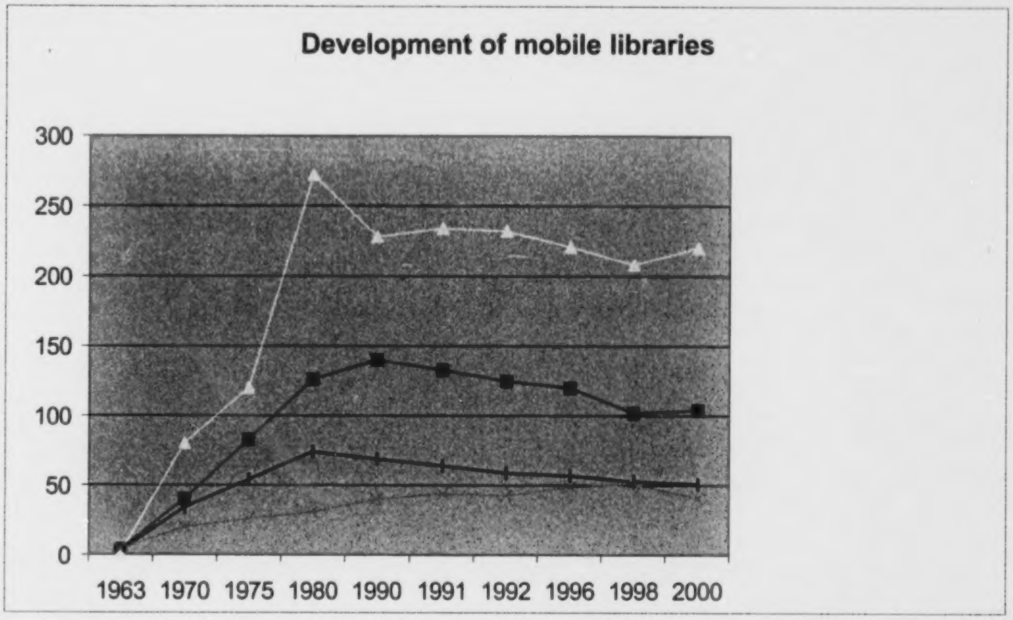

Fig.2

In **Finland** the library act of 1962 made it possible to purchase and operate mobile libraries with substantial governmental aid. In 1972 Finland had 120 busses, and the amount rose to 272 in 1980. Later is has decreased, but still mobile libraries are an essential part of the public library system in Finland. The mobile libraries in Finland are owned by the local authorities. Primarily they serve rural areas.

Since 1979 Finnish local libraries have had their operational costs financed by the State government, on the same basis as the educational system. Up until 1992 the financing was earmarked. Between 1979 to 1992 governmental grants covered 51% to 86% of public libraries' operational costs , the highest rate relating to poor and sparsely populated local authorities. This centrally instigated enterprise made it possible to develop a library system of the highest quality, covering even de sparsely populated parts of the country with a web of libraries. Between 1979 and 1992, the State government covered between 5% and 92% of construction costs.

In the 1990s, Finnish local authorities were given extensive autonomy. No longer libraries were going to receive State government subsidies directly, according to predetermined percentages, like they had been used to for decades. Today, libraries are covered by a statutory financial program, along with others of the State government's educational and cultural obligations. Bur as libraries no longer receive direct State government grants according to predetermined percentages based on the financial capacity of the locality, it is difficult to calculate the sums allocated to the library system. It is left to local authorities independently to assess their financial share of libraries' operational costs. (?)

The construction and establishment of a new library is governmentally subsidized by 25% to 50% of the costs. By application, a mobile library may be established on the same terms, together with other libraries that are subsidized for a special purpose(provincial libraries, central library, multicultural library, the Saami library, co-Nordic bookmobiles).

As the first of the Nordic countries, **Denmark** had its first mobile library running in 1926. However, an up-to-date service, lending books directly to the users, was not introduced until the end of the sixties. In 1970 a reform of the Danish local administrations, merging a great number of local authorities, created an increased demand for mobile libraries: These new and larger local authorities chose to establish mobile services, in order to speed up the introduction of an adequate library service in rural areas. With the help of the free reserve kept by the Danish library authorities, it was established a rental agreement with the library support center (Bibliotekcentralen). This resulted in no less than an avalanche of mobile libraries, most of them with a capacity of 3000 - 3500 volumes. Now, the buses are mostly financed by the local authorities.

The Danish public library act of 1964 established a State governmentally grant of 45% of the libraries total operating costs up to a certain level and 30% after this. The most important subsequent revisions of the act took place in 1985 when the public libraries' ear-marked government grants were changed into block grants, turning the public libraries into purely local institutions, and later in 1993 when the State government was given full financial responsibility for county libraries. These 14 county libraries also functions as local public libraries.

In later years, even Denmark has experienced a reduction of mobile libraries. From 1988 to 1999 259 library branches and 16 mobile libraries were closed down. The reasons are various: a decline in the number of customers; the necessity to strengthen the main library; local saving programs. Today there are 51 mobile libraries in Denmark, a decrease of three from last year.

In spite of these set-backs, the mobile library still has a strong position in the country. There has been a will to modernize the concept, both as far as content and equipment is concerned. Older units are constantly replaced. In their budget negotiations, Danish local politicians give a priority to expenditure on mobile libraries that is quite foreign to their colleagues in Norway and Sweden.

In **Sweden** the first mobile library was established1948, based on British and American patterns. The first regional mobile library was financed through a collection, organized by local authorities within the county in question. Other counties hired busses instead of buying them.. Gothenburg, the second largest city in Sweden, had 4 busses in 1962. Since 1984, no goevernmental grant has been allocated to mobile libraries in Sweden.

Sweden was without library legislation between 1965 and 1997. Traditionally, central influence on the library situation has never been very strong, so the standard of Swedish libraries has varied. Also, Sweden has tried running public libraries on a commercial basis. There are now 104 bookmobiles in Sweden. For the most part they operate within one locality. However, nineteen local authorities are sharing busses.

Both Denmark and Sweden reached a peak in 1989, with respectively 69 and 140 bookmobiles.

In Scandinavia, like the United State governments, the first buses were launched by private initiative. A Norwegian part time librarian, who also happened to be a baker, took the saying "Man does not live on bread alone" quite literally. He filled his bakery van with books from the local library, and then hit the road in order to feed people's hunger for literature. This was in 1938. In 1939 two bus services, operating on a regional basis, were established. A library boat, "The Epos", was launched in 1958. In spite of promising early starts, thanks to crusaders for the course of public library, Norway experienced no really significant development until the Library Act of 1971.

The Act paved the way for governmental financing of local and county mobile libraries (buses and boats). These subsidies stipulated that a certain amount of money, for the same purposes, was granted from local and county authorities. Thus the governmental grants were an "approximate appropriation". This meant a great deal for the development of a mobile library service in the 1970s and1980s. These grants rose from NOK 184 000 in 1971 to a total of 7.5 million in 1985.

When governmental grants earmarked for operating mobile libraries were withdrawn in 1986, this service rapidly experienced stagnation. The new regulations provided some means for the purchase of vans/buses, but operational subsidies were only granted to local authorities on a three-year period trial basis. This system was implemented in 1986, and lasted until 1993. It had no enterprising effect. On the contrary: Planned projects were shelved. In 1993 policy was changes once again: Operational costs should be covered only for local authorities in sparsely populated areas, as part of a regional development program. However, all counties and local authorities would receive a 50% support in the event of bus purchases. This led to some new activity.

In 2001 a new change has taken place. he State government withdraws even further from its previous engagement. As already mentioned: From this year on subsidies of operational costs will be transferred to block grants, leaving mobile libraries at the mercy of regional and local priorities. There will be no support for the purchase of new buses.

Trends:

I personally believe that, if we keep Norway out of it, by now the number of mobile libraries in the Scandinavian countries are fixed - more or less. To maintain today's level, it will not be enough to replace old buses with new one and otherwise keep on as always. The quality of the bus services must change according to changes in society at large. Mobile libraries must be a part of a value adding public library system, and therefore join the new trends of development.

The trend today is twofold: either smaller units designed to serve special target groups; or big, fully equipped units with an enlarged staff, designed to replace ailing branches with limited opening hours. If the alternative is closing down the service, old units are frequently renovated. To avoid the same, two or more local authorities often join their forces, sharing a mobile library between them.

In Scandinavia there is a tendency towards a narrowing focus within this field. From being movable library branches, the buses now offer specialized services to special target groups.
Significantly, installation of computer facilities has made customers feel that mobile services are in no way inferior to a stationary library. Some units profile themselves as "Internet Buses", offering computer training and free access to the Web. In the future, it is not only access to but particularly the quality of knowledge that will be important. The library, as a quality institution, is expected to provide the answer to this. This is also a challenge to mobile libraries.

One particular locality in Denmark allows the bus to have exceptionally long afternoon stops at places that cover immigrant communities: In this way, foreign speaking children may have a helping hand with their homework. Another locality specifically uses the bus in a project of language stimulation for children in transition from kindergarten to school. In addition, experiments have been made using the mobile libraries as a vehicle - so to speak -in the education of adults. One Danish bus is specially equipped to serve children under the age of six. In many Norwegian local authorities, with a number of schools that are too small to develop their own library, the buses represent the only library service offered to the pupils.

In Sweden many of the buses specialize in cultural activities. In Norway one bus is used bringing cultural presentations to children all over the region, a joint venture involving both schools and public libraries. These tours involve a wide range of cultural expressions, inspiring pupils and teachers alike to venture into foreign territory: at one time a belly dancer, at other times a sculptor, a drummer or an African storyteller.

In scarcely populated parts of Scandinavia mobile libraries are even used to distribute public services other than the original purpose. Examples exist of buses functioning as banks, in addition to libraries, and also - since trading wine and spirits is controlled by the government in Norway, Sweden and Finland - as distributor of alcohol.

As in most fields within the library system, Denmark represents the Scandinavian avant guard as far as new trends in mobile libraries are concerned. Norway, a much more conservative nation , mostly follows the beaten track - although one or two signs of innovation do exist.

Conclusion

During the last thirty years, financing of Scandinavian public libraries has seen great changes. The main reason is the introduction of a system of block grants from central government to county and local authorities. Another factor is a general worsening of the economic situation within public service.

Differences between Norway on one hand, Denmark and Finland on the other, existed before the new grant system was introduced, in regard to both library use and appropriations. The former Norwegian library director Else Granheim explains this as follows: If Norwegian State government grants, as in Denmark and Finland, had been provided on the basis of total operational expenditure instead of being based on a sum per inhabitant for materials and labor expenses, the situation would have been quite different. In Finland prospective grants for the acquisition of mobile libraries have been included in the budget. This practise still is customary, and the results are clearly visible in the statistical overview. From time to time, grants of this type have also been provided in Norway - not on such favorable terms, however, and no garantee of a continuation has been included in the legislation. The grant scheme tried out in Norway between 1993 and 2000 did little to increase any significant local interest in the mobile library service.

It is safe to say that the general attitude of Norwegian local politicians, regarding mobile libraries, has not been a positive one. Ailing local finances have led to a greater degree of centralization – schools have been merged and post offices closed. In many places this development leaves the library as a last stand in a fight to preserve a communal culture. To keep the library open as a meeting-place, even if it fails to meet requirements in respect of bookstocs, information services, opening hours etc., is vital to the social well-being of many small communities. In such a situation it is difficult to make local politicians invest in mobile libraries, even though they will provide a much better service, with more modern facilities than stationary libraries. As mobile services were not firmly established during the good times, it's hard to make room for them in this lean day and age for Norwegian local authorities - even more so since the State government has discontinued its earmarked grants to libraries.

During the last few years, a number of branch libraries have been closed. Even then, the Norwegian library system includes an amount of exceptionally small and vulnerable unites - too impotent to defend their existence in the long run.

I believe stagnation of real growth within the mobile library field - since the mid eighties, in fact - has two reasons. First: The notion that a good bookmobile is far better - and cheaper - than one or more bad branch libraries, has not taken hold of politicians on the local level. It is a problem that most bookmobiles in Norway are owned by county libraries - not by local authorities, who fail to develop a feeling that the mobile library is their concern, a responsibility from which they can benefit. These buses cover vast areas. Their visits are too rare to make an impact on local communities.

Second: To no great extent has mobile library services in Norway been developed beyond the concept of a slightly old-fashioned branch library on wheels. The absence of a contemporary raison d'etre is a soft spot indeed. The bookmobile has been wide open to brutal extinction, in favor of pooling resources to bolster an up-to-date main library.

By contrast, the Danes have been able to put up a fight to protect their mobile libraries. Politicians have identified themselves with the cause, the buses being their own babies. And an innovative capacity to redefine the mobile library's functions in changing times, indicates that bookmobiles will have a future on the road in Denmark. In Finland mobile facilities are an established part of every local library system.

In Norway neither the development of mobile libraries nor regular library premises have a strategic basis within national planning. Sadly, political signals point in the wrong direction - notably the dismal practice of letting library subsidies be included in government's block grants to localities, leading the way to valuable library services being beheaded in favor of schools, hospitals and equally noble causes. Local mobile libraries, a relative novelty without the protection of political knights in shining armor, is an easy target when budgets lose their balance. On county level bookmobiles stand a better chance to survive. The problem is that county organization of the service, too far away from the customer, blocks bookmobiles' potential to be an inherent and valuable part of local communities.

As far as Norway is concerned, chances are - I'm sorry to say - that the bus has literally left the bus stop, with us Norwegians left behind because we didn't mark the time. Only if a national library policy eloquently speaks in favor of the mobile library as a field of enterprise, supporting it with earmarked financial investments, will the mobile library stand a chance in future Norway. Alternatively local authorities must receive enough founding to be able to establish mobile libraries wherever there is a demand for it.

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Driving the boundaries in the knowledge age – the boys and girls clubs of king county techmobile

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Abstract:

Rapid increase of technology has widened the gap between the haves and have-nots. Bridging the digital divide has been a wide spread topic of discussion. An explanation of the Techmobile Project as the Boys & Girls Clubs of King County solution to bridging the local digital divide.

Background

The Boys and Girls Clubs of King County faced the challenges of budget constraints, space limitations and the costs associated with placing computer labs in each of their sites. Placing a computer lab at each site was a great idea but an expensive endeavor they could not undertake at all facilities. Not an organization to be easily discouraged, they began to think about alternative solutions to providing computer labs at each site. From this a vision took shape. How about having a computer lab on wheels that would allow the technology to go to communities that do not have access to computers and the Internet due to space or monetary restrictions? This would allow the Boys and Girls Club to provide a cost-effective mobile solution to the technology needs of the children in King County. From this vision of technology plus mobility, the Techmobile was created. Technology to the Boys and Girls Clubs of King County would be delivered on wheels!

This paper will discuss the journey taken by the Boys and Girls Clubs of King County toward the goal of mobile technology.

Introduction

Mobile services in the form of boats, donkey carts, buses and others are not new to the world of librarianship. As patrons become increasingly exposed to computers in their daily lives, librarians look for ways to ensure that those who receive mobile services have access to services similar to those who frequent physical buildings. In the last few years, librarians have looked to adding computers to their mobile service units. Computers in mobile services were first used for circulation and OPAC services and more recently have encompassed Internet connectivity. Mobile services have piqued the curiosity of libraries and sent many hurtling down the technology path. Having a mobile unit with Internet connectivity has become an item high on the agenda of libraries that provide mobile services. Libraries and other organizations that offer public services are eager to convert/add to their mobile services. How to achieve this and stay within a library budget as well as maintain a viable Internet connectivity solution has become a challenge faced by all. The Techmobile project is an example of a technology solution that could help librarians make a difference in the Knowledge Age. It is hoped the discussion of these trials and tribulations will be of help to those thinking about starting a mobile computer service or expanding existing OPAC services to offer Internet access.

Who They Are

The Boys & Girls Clubs of King County's mission is to inspire and enable all young people (ages 5 – 18), especially those from disadvantaged circumstances, to realize their full potential as productive, responsible, caring citizens through specialized programs and services. With ten full service clubhouses, twenty-four child-care facilities and fifteen school-based programs and numerous extension sites in Seattle and King County, the organization is one of the largest of its kind in the nation, serving over 17,000 members. Program areas offered to youth include character and leadership development, teen programs, drug and alcohol prevention, education and career development, health and life skills, the arts, computer training, cultural enrichment programs, sports fitness, social recreation, before and after school care, youth employment, career training, homework assistance, summer camps, and more. The Boys and Girls Club's goal was to create a computer lab with Internet connectivity that could drive to any of the Boys and Girls Clubs, schools, housing complexes or other buildings to be used by the members of the organization or community. This computer lab would bring countywide opportunities and education skills in computer education to the King County Boys and Girls Club members, an opportunity they otherwise would not have. The vision was to introduce, inspire and educate King County residents to become computer proficient with an emphasis on those who are low-income, minority and/or limited English speakers. The challenges the Boys and Girls Club of King County faced were how to fund, design and build a mobile computer lab. A key part to achieving their goal was establishing partnerships.

The Partners

In 1998 Microsoft created a partnership with the Boys and Girls Clubs of America to help bring technology centers to clubhouses all over the United States. As a result 15 test sites were created, one of which was the Boys and Girls Clubs of King County. In collaboration with Microsoft, the Bill and Melinda Gates Foundation committed to provide all 15 sites with the Gates Library Computer configurations, training and technical support to these sites. The Boys and Girls Clubs of King County wanted to have a unique computer lab, one that could service its entire member base, not just those that could make it to one location. Microsoft's donation would be used to purchase a 30-foot Winnebago. Having secured the funding for the vehicle the Boys and Girls Clubs of King County still needed technical expertise to implement the project and support to purchase computer equipment. Another important financial consideration was to ensure ongoing technical support. These factors were all crucial to completing the project. They approached the Bill and Melinda Gates Foundation's Community

Access to Technology division with their proposal to bridge the digital divide by providing mobile computer access to the children of King County via the Techmobile, a mobile computer lab. The proposal was accepted and the Bill and Melinda Gates Foundation committed to creating the technical design, as well as providing appropriate hardware and software, training, Internet connectivity and technical support. Other partners included AT & T, Car Toys, City of Seattle, GM Nameplate/ XL Graphics, and the Medina Foundation.

In the Beginning

The Winnebago, soon to be referred to as the Techmobile, was delivered to the Bill and Melinda Gates Foundation in July 1999. In the beginning it was an empty shell stripped of all amenities except for an air conditioning unit, heater and generator. Staff gathered around the 'white whale' as it was soon to be dubbed and began to imagine the possibilities for the Techmobile. Over the next few months the Boys and Girls Clubs of King County vision of a mobile computer lab was transformed into a reality. The following is a brief description of the transformation process.

A Vision Becomes a Reality

The first step was wiring the Winnebago for data and electricity. The limited space combined with the fact that the users were children meant that a creative solution for keeping the wires out of reach was needed. The most effective solution was dual channel G4000 Raceway. The Raceway would allow the electrical wires to run in the top portion while the data cables run in the lower section. First the empty Raceway was fastened to the perimeter of the interior of the Winnebago. Next the wires were inserted and tested prior to the Raceway being closed. This product was an excellent solution for space saving and wire protection and safety along with safety for children, no exposed wires to trip on. Beware! Although it is an excellent space saving and wire-hiding solution it has one major drawback, once the Raceway is in place, getting to the wires is not an easy project. The Techmobile was wired for forty ports although only fifteen are in use.

Once the wiring was completed the desks were assembled and a custom built cabinet was installed. The custom cabinet was placed at the back of the Winnebago. It has a twofold function second to store the server and hub behind closed doors away from curious fingers, and second, to be a central location for the two printers and a scanner. The desks were placed around the Winnebago to maximize the teaching space.

Next came the computer equipment installation. A Gateway ALR 7200 Server, eight Gateway Profiles and four Gateway Solo 9500 laptops were selected as the most functional for the Techmobile. The ALR 7200 was going to be utilized as a storage device for the student work as well as a print server. The Bill and Melinda Gates Foundation systems engineering department built a custom image for the Techmobile using the software and the Windows NT server and workstation operating systems Microsoft donated. The image was modeled after the Gates Foundation Gates Library Computer, the PC model created for the US Library Program, which is a customized build noted for its security features to be used in areas where there are a high volume of users. One of the main features is that the users cannot save to the hard drives of the individual workstations. The server was physically installed into the custom cabinet. Aeroflex Shock and Vibration Isolators attach the server to the floor of the Winnebago. The Isolators are a key part of the installation equipment. They keep the server and its internal components from being jostled out of place while the Techmobile is in motion. The Isolators are a key part of keeping the server safe and maximizing its longevity.

The Foundation staff then installed the eight Gateway Profile computer workstations. The Profiles are often mistaken for flat screen monitors but actually include CPU, CD-ROM, floppy drive, a monitor and hard drive build into approximately 10 inches of desk space. Given the space limitations of the

Winnebago, their compact design made them a perfect fit for the Techmobile. Not only were they space savers; they also weighed less than a typical monitor and CPU PC setup (less weight is easier on the Winnebago and fuel consumption). Avdex specially designed brackets provide dual functionality. They keep the computers stable and in place and locked to the desk. Mouse holsters are used to hold the mice and Velcro was installed at each workstation to keep keyboards in place and to minimize movement while in transit. All the Profiles used Ethernet connects to connect to the network.

Next the laptops were installed. Cisco Aironet 3 40 wireless LAN products were used to connect the four laptops to the network. The wireless PCMCIA cards replaced the standard cards in the laptops and provided connectivity to the wired LAN via radio frequency communications. The laptops are able to roam freely up to 1, 500 square feet from the Techmobile and send and receive data at a rate of 11 MBPS. The purpose of using wireless to connect to the network was to enable the laptops to be taken inside a building or used outside. The Techmobile's ability to serve users is expanded by having this flexibility.

It's A Wrap

GM Nameplate/XL Graphics donated the design and application of a spectacular exterior large format graphic vinyl wrap for the Techmobile. They transformed the idea of the Techmobile into a series of images. The wrap consisted of a series of enormous stickers. The stickers were skillfully placed on and cut to fit the whole exterior of the Winnebago. The installation technicians applied each sticker individually, then heated them ensure they would adhere permanently. They also donated the interior graphics to create a welcoming but cool atmosphere for the children. The vinyl wrap is an essential part of promoting the Techmobile and spreading the word of its existence and purpose. Wherever the Techmobile goes it makes a statement and leaves lasting impressions!

Connectivity

Unfortunately, at this time the Boys and Girls Club is still researching a cost effective Internet solution that fits their needs. Originally the Techmobile used DirecPC, a service that provides Internet access through private satellite dishes. DirecPC allowed the Techmobile to provide an Internet connection without being physically connected to a physical phone line. Outgoing requests for web pages (upstream traffic) went through an AT & T Wireless Cellular Digital Packet Data (CDPD) Modem. This rugged modem is used in many mobile applications and transfers the outgoing requests for data at 19.2 KBPS. However, the web pages were delivered (downstream traffic) through the satellite link at up to 400 KBPS (about 15 times faster than a 28.8 KBPS modem, and 4 times faster than an ISDN connection. A Gateway E3200 with an ISA card was placed in the luggage compartment of the Techmobile and controlled the DirecPC connection. DirecPC turned out not to be a viable solution for the Techmobile. The satellite dish had to be set with a direct, unobstructed line of sight southeast at each location. Due to the Techmobile's mobility, 85 % of the sites could not establish a connection. Given that the Techmobile serviced at least two locations daily, a lot of time was being spent trying to position the satellite.

The next Internet connectivity solution was a product called Ricochet provided by Metricom. Ricochet network consists of microcell radios strategically placed every ¼ to ½ mile in a checkerboard pattern on telephone poles. Modems communicate with the pole-top radios to transfer data. The Seattle area has 28.8 kbps service at the moment. Metricom intended to have 128 kbps services for Seattle last January. In June, Metricom filed for Chapter 11 bankruptcy protection thus leaving the Techmobile staff searching for a viable Internet solution.

Lessons Learned

Numbers are not everything! The Techmobile was designed with eight workstations and four laptops in mind. But the instructors have found that often eight workstations and only two of the laptops are utilized as they have found it too difficult, given the layout of the vehicle, to keep twelve youths on track during a class. When designing the space keep in mind that it will be used for instruction. Packing in as many computers as possible will lead to the instructors having to perform gymnastics.

The reality is that mobile computer services can be brought to those who do not have access to technology. The challenge is reliable, affordable connectivity. Connectivity issues remain one of the major obstacles that discourage those who would like to expand their library services to include the Internet. The Techmobile is not a unique project. There are other organizations making a difference in the Knowledge Age by bringing mobile services with active Internet connectivity to their communities. A few examples of mobile projects are the eBus (http://communityconnect.org/), the Can (http://nbfy.com/) and the Cybermobile (http://www.munpl.org/Main_Pages/Cybermobile.htm).

Conclusion

The Techmobile is making a difference in learning opportunities for the children and young adults in King County. Since the Techmobile was unveiled at a press conference on October 27, 1999, it has been visiting locations in King County providing computer instruction to children. To date, over 3000 hours of lessons have been taught at fifty – sixty different locations throughout King County. Some of the classes offered are: Adobe Photoshop, Microsoft Publisher, and PowerPoint.

Originally the Techmobile had funding for one full time staff member. The proven success of the Techmobile has lead the City of Seattle to fund a second, full time position for the Techmobile. The creation of this position has allowed the staff to focus on scheduling more site visits, curriculum development and establishing and leveraging additional support from other funding sources to assure the sustainability of the initial capabilities provided by the grant. The Techmobile is meeting its goal of bridging the digital divide by providing a cost-effective mobile solution to the technology needs of children in King County. The Boys and Girls Clubs of King County and other organization, have proved that if you build a mobile computer unit, be it on a boat, in a bus or a Winnebago, the people will come.

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Managing Academic and Research Libraries Partnerships

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There are many changes taking place in higher education based on the evolving information and technology environment. Information is generated at a faster pace than ever before and information has become a major component of all part of society and economics. Many industries and enterprises are based on information and information-related technologies. Students enter the universities with high expectations related to information and technology and present the faculty and administration with unique challenges. Competition for students, funding and technology experts is a regular occurrence within the higher education environment. Demands from funding and governing agencies are increasing in terms of measuring learning outcomes of all students and programs. Updating the university curricula so students and governing groups are satisfied present additional challenges for faculty and administrators. Additional demands for higher productivity on the part of faculty in terms of teaching and research and scholarly activities place more stress on the higher education environment.
Students are demanding flexible learning environments more utilization of the World Wide Web in teaching and learning activities and 24-hour access to information.

Librarians and information professionals have also been addressing the many changes caused by the electronic information environment, and they are dealing successfully with this changing situation. Professional organizations such as the Association of Research Libraries (ARL) are developing assessment criteria for research libraries, scholarly, cooperative ventures for information sharing and provision, global ventures and other new information-related activities. The Association of College and Research Libraries (AC RL) has developed a number of new activities for their constituents including outcome measurements for information literacy in the higher education environment.

Academic librarians throughout the United States are rethinking their activities and repositioning themselves in their campus environment. They are raking advantage of new opportunities to build new partnerships and enterprising endeavors with faculty, researchers and campus related entities. The November 2000 issue of *College and Research Libraries News* features an article by Carla Stoffle and others, which discusses how academic libraries and librarianship should be reinvented.[1] Listed are seventeen challenges for academic libraries and these challenges can be met. The scholarly communication environment is described as well as the academic librarians' role within it. Ten axioms are provided to help academic librarians be successful in the new century. Above all, the article addresses the effect of the external information environment on libraries and librarians and provides some guidance on how to deal with that.

Another pertinent publication dealing with collaborations between faculty and librarians to teach students information skills is the *Collaborative Imperative: Librarians and Faculty Working Together in the Information Universe by* Dick Raspa and Dane Ward.[2]
The authors define collaborations, present literature reviews and several national models of faculty-librarian cooperative ventures.

Ilene Rockman recently published an interesting article on strategic alliances entitled "The power of Collaborative Partnerships" highlighting partnership models outside the traditional teaching and learning arena.[3] Such collaborations can include athletics, communities, fundraising and others.

Academic libraries, particularly research libraries, do need to become more involved in the teaching, research and enterprise activities of their universities if they want to remain viable and competitive in this new information environment. Outreach activities to faculty, technology, students and others are necessary now as never before if libraries want to remain a major part in the educational enterprise and continue to wee-funded. For librarians as well as faculty outcome assessments are becoming a serious reality so they can respond to the inquiries from funding groups in terms of what their contributions are to the educational enterprise.

The University of Louisville is Kentucky's Metropolitan Research University with ambitious goals for education and research, fully supported by the libraries. The University of Louisville is a good example of a successful scenario where through a variety of partnerships the libraries have become more central to the campus teaching and learning community. Some of the initiatives described are small, some are large, some are less significant, some are more significant, but all of them have helped the libraries become more visible on campus and in the community, more involved in teaching, learning and research and ultimately, more effective in producing positive learning outcomes.

Faculty-Librarian Partnerships

Forming partnerships with faculty has been a goal for academic librarians for a long time. Librarians support teaching, learning and research by building collections, providing electronic information access, offering proactive library services and integrated information skills instruction. At the University of Louisville librarians, who are members of the faculty, have begun to form strong partnerships with a significant number of their teaching colleagues. The Library Liaison Program, in existence for several years, connects all librarians with relevant faculty departments for the purpose of collection development, library services and support, as well as information literacy instruction.

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[1] Stoffle, C. et al "Predicting the future. What does academic librarianship hold in store?" *CRL News* 61, No. 10 (November, 2000), 894-901.

[2] Raspa, D. and Ward, D. *The Collaborative Imperative*. Association of College and Research Libraries, Chicago, 2000.

[3] Rockman, I. "Strategic alliances: The power of collaborative partnerships", *CRL News*, 62, 6 (2001), 616-618, 621.

- **Information Literacy**

Information literacy is defined as "the ability to recognize when information is needed and to locate, evaluate and use needed information effectively".
At the University of Louisville librarians provide approximately 500 sessions of curriculum-integrated information literacy instruction a year to more than 8,000 undergraduate and graduate students, particularly in the health sciences, music, art, business, chemistry, education, engineering, social work, and English. They have created information literacy competencies for the different levels based on the Association of College and Research Libraries *Information Literacy Competencies Standards for Higher Education*, adopted in January 2001. http://www.ala.org/acrl/ilcomstan.html

They have incorporated active learning techniques in their information skills instruction. Working in close partnership with the teaching faculty librarians have integrated a required component of information literacy instruction in the honors program and in the undergraduate requirements.

- **Distance Education**

The University Libraries support twenty distance education programs, particularly in business, education, engineering and social work offered by the University of Louisville in Kentucky and other parts of the country and the world. The courses utilize satellite television, interactive videoconferencing and the web as on-site teaching at off-campus locations. The majority of the programs are at the graduate level including a doctoral program in social work. The Distance Education Librarian works with faculty to prepare distance education courses, trains them in information literacy instruction and provides information and instructional support for the approximately 3000 students enrolled in these programs as far away as Athens, Cairo, Hong Kong, Singapore, Panama and San Salvador.
www.louisville.edu/library/dlls

- **Faculty Development**

In 2000 the Delphi Center, a faculty development center for the purpose of helping faculty bring technology into their teaching and develop online courses and programs, was relocated into the main library at the University of Louisville and an additional branch will be located at the Health Sciences Library. Librarians are beginning to work with faculty as they restructure their courses and programs to teach in the electronic environment. The libraries have created an Office of Distance Learning Library Services (DLLS) within the Delphi Center to work more closely with faculty development for distance education.

- **Writing Center**

The Writing Center, part of the College of Arts and Sciences, was moved into the main library at the University in 2000. The library works with the Writing Center personnel to support the students using the Center to improve their writing skills related to term papers, essays, theses, proposals, resumes and others.

- **Metropolitan College**

The Metropolitan College is the result of a partnership between the University and UPS (United Parcel Service) to provide higher education opportunities for UPS employees. The libraries are participating through the Metro Computer Laboratory, a state-of-the-art computer facility for all students to learn computer skills, prepare their course work, and do research with the guidance from library-trained assistants.

- **Research (scholars' qualifications)**

Librarians partner with the Research Office to evaluate the University's scholars qualifications, grant support and research support for the University's more than seventy endowed chairs as well as all researchers supporting the many University institutes and research endeavors.

- **Assessment**

The Libraries are partnering with all academic units to assess educational outcomes. Working with an external company survey instruments have been developed and include relevant information regarding the libraries and information support. The libraries have also developed their own survey instruments for various campus groups. The first series of surveys has been collected and summarized. The results of these surveys have been most encouraging in terms of student satisfaction with library and information support as well as outcomes related to library and information skills.

Partnerships in the Health Sciences

The Health Sciences Library supports the health sciences campus units, Dentistry, Nursing and Medicine and has built strong partnerships over the years with various constituencies.

- **Initiatives with the Hospitals**

The library has worked with the three municipal hospitals to share resources and training. A strong partnership has been formed with the University Hospital to administer that library under contract. A partnership with another hospital has enabled their library to become part of the Libraries' Endeavor system. The three hospitals have an informal consortium for joint purchasing of health care databases and electronic journals.

- **IAIMS Grant for Informatics**

The library has worked with all constituents on the Health Sciences campus, Dentistry, Nursing, and Medicine to obtain a two-year Integrated Advanced Information Management System (IAIMS) grant from the National Library of Medicine.

The purpose of the grant is to plan for the integrated use of healthcare information for support of education, research, clinical care, community health and consumer health. All health care related organizations in the greater Louisville area are included in this joint effort.

Partnerships on Campus

Opportunities arise regularly to form more and new partnerships on campus and at the University of Louisville librarians have begun to take advantage of such opportunities.

- **Students**

The libraries work closely with student government groups, undergraduate and graduate students, to address their information needs and to ensure that they have appropriate physical and electronic access to libraries and library information.

Adding a first class coffee bar in the main library, lending laptops to students, extending library hours, doing a joint student library survey, and general student satisfaction and regular increases in library use are but a few of the outcomes from the students-librarians partnership.

- **Information Technology**

Keeping the library on the cutting edge of technology in terms of computers, software, networks, training and security is based on a strong partnership between personnel in Information Technology and the University Libraries Technology Office. The libraries' client server system, Endeavor, is jointly administered by the two units, not only for the University of Louisville but the western half of Kentucky, another partnership. The powerful campus network, administered by Information Technology, helps the libraries remain on the cutting edge of technology. A partnership with Xerox insures state-of-the-art copying and printing technology for all campus users.

- **Metroversity**

Metroversity is a consortium of all academic institutions, public and private, in the Louisville and Indiana areas to support higher education and workforce development. The universities and community colleges work together to ensure that the population receives opportunities for higher education without too much duplication.

The relevant academic libraries including some public libraries have formed a Library Council to address the information needs of students and the public in terms of education and work force development. Through resource sharing of information using interlibrary loan, special loan privileges and web sites the libraries are contributing to the area educational goals.

Partnership with Other Libraries

Cooperative ventures among libraries have long been a strong component of library work in Kentucky. In recent years such ventures have included partnerships with public and school libraries. The University Libraries have worked with the Jefferson County Schools Media Centers and the Louisville Free Public Library (LFPL) on a variety of projects.

- **Professional education**

The shortage of librarians in the Louisville area is acute and the University Libraries have worked with the school media centers and the public libraries to bring two thirds of the library and information science program from the University of Kentucky to the University of Louisville. Librarians from the University and the public libraries teach most of these classes in the University Libraries. Some classes are taught through video conferencing. Thanks to this partnership the University Libraries were able to establish a minority librarian internship in reference where the individual works full time in the library while completing a master degree in library and information science.

- **Managerial training**

The Louisville Free Public Library has contracted with the University Libraries to provide a year-long management training program for beginning public library managers in cooperation with the University's School of Business.

- **Information literacy training**

The University Libraries are working with the librarians in the school and public libraries to help them develop their instructional expertise to teach information skills.

Statewide Library Partnership

The Kentucky Virtual Library was started in 1999 as a consortium of all libraries in Kentucky, private, public, state, academic, school, public and special. The purpose is support for distance education, support for the Kentucky Virtual University, information sharing, access to electronic databases, reference and web-based tutorials for learning information skills electronically. www.kyvl.org

Conclusion

Based on the University of Louisville' experience with partnerships involving academic libraries this seems to be a good direction in which to move at the beginning of the 21^{st} century. Academic librarians need to be aggressive, able to take risks and work with their academic environment to be successful in this competitive information age. They need to be open to new ideas and cease new opportunities as they arise. Research libraries in the 21^{st} century will continue to be major players in education and should become the center on their universities for teaching, learning and research activities. They can successfully do that if they utilize their unique and specialized expertise, think out of the box, reach out to form new partnerships and achieve measurable educational outcomes.

A Few Examples of Other University- Libraries Partnerships

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Managing Partnerships With University Support Units

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Extending the library's reach through strategic partnerships, mutually beneficial alliances, collaborative relationships, and creative ventures, is an important goal for any academic library. With the reality of limited and/or diminishing fiscal and human resources, many library administrators have come to recognize that they must rethink agendas, leverage resources, and create new opportunities in order to successfully carry out and accomplish their goals and objectives.

In addition to partnering with faculty members to fulfill its instructional mission and promote its services, university libraries can actively engage with a variety of campus entities to support common goals. Libraries must work closely, creatively, and consistently with key campus constituencies to accomplish their intentions to remain a vibrant and exciting campus locale.

As Peter Drucker tells us, "very few people work by themselves, and achieve results by themselves."

The purpose of establishing partnerships is well summarized by Bergquist, Betwee, and Meuel (1995). They note that

- Partnerships are formed to yield efficiency. Partnerships allow participating organizations to do more with less. They provide high-quality products or services at lower costs than is possible working in isolation.
- Partnerships provide flexibility. Their structures and agreements can be readily changed to meet shifting needs and conditions.
- Partnerships offer expanded resources. Partners have easier, more convenient access to important specialized resources, such as expertise, space, technology, and materials.
- Partnerships often create expanded markets for their participating organizations, including a wider geographic reach and/or access to new segments of an established market.
- Partnerships offer their participants a sense of interdependence. They offer both connections and community, increasing their participants' involvement with and reliance on people in other participating organizations.
- Partnerships offer an increased opportunity for personal gratification, including increased personal involvement, control, and professional fulfillment.

Effective partnership planning begins with the identification of key groups, or stakeholders, which share common values, possess needed expertise, or creatively can enhance and expand library services and programs. Harrison and St. John (1996) point out that there should be a positive relationship between the strength of the alliance and the strategic importance of the stakeholder. When forming a strategic alliance, it is important to clarify expectations, plan accordingly, maintain trust, communicate frequently and openly, clearly delineate responsibilities, and resolve conflicts through joint problem-solving techniques.

The following pragmatic examples of library partnerships demonstrate various characteristics of these partnerships. In addition, the examples illustrate a shared sense of commitment and direction, and may provide inspiration to others to establish similar ventures.

Celebrating Campus Authors

Since many academic libraries collect the written works of faculty and staff, keep them in their university archives, and provide access to them through their online catalogs, several university libraries establish partnerships with campus bookstores to recognize these scholarship and learning contributions by campus authors.

Annual events are created to increase campus awareness of these works, to honor the authors, and to promote the role of the library in preservation and access to these works.

Each year, the Kennedy Library of California Polytechnic State University (Cal Poly) partners with the campus bookstore to honor campus authors during National Library Week. In 2001, the event coincided with the campus' Centennial Celebration, so the event was titled, "Celebrating A Century of Scholarship". The purpose was to showcase 100 years of scholarship at the university, and to honor campus authors who published books in the prior year, 2000.

The event took place in the library's foyer, and included a reception in the library atrium. During the event, the library presented certificates to the authors, showcased an exhibit of books by university authors, invited the President and the Provost to share remarks, and included an author book signing event which also benefited the Cal Poly Authors Collection within the University Archives. Close to 30 authors participated in the event.

As noted by Harrison and St. John, efforts to strengthen linkages with constituencies often provide significant benefits, and author celebrations are one such example.

At Southern Methodist University (SMU) in Dallas, Texas, the University Library, in conjunction with the Faculty Senate and the Friends of the SMU Libraries, hosted a reception in April 2000 at the Fondren Library Center to recognize faculty authorship, editorship, and artistic works. As was the case at Cal Poly, the campus President and the Provost were invited to speak. They congratulated and honored campus faculty for producing more than 150 works (journal articles, books, musical scores, and music compact disks) published in 1999 in 26 different disciplines. An exhibit of the works were on display on the first and second floors of the library.

Following the reception, the Faculty Plaza was dedicated. At this dedication, university officials announced that $40,000 in donations was raised to honor past and present faculty members, which created an endowment for future library acquisitions.

Raising Funds For A New Building

At Biola University in Southern California, an informative web page has been developed to solicit donations for completion of a new library resource center. This center will provide expanded study space and state-of-the-art technology. Visitors to the web page can make an online donation to the library, view photographs of the progress of library construction, see a live webcam, or watch a streaming video of the construction. All of these activities help to make potential donors understand the importance of their contribution in helping the library to complete the building project

Honoring Library Student Assistants

In addition to "reaching out" to raise funds, another method is to "look inward" by focusing on the future gifts from current library student employees in collaboration with the university's advancement division or development office.

Since libraries rely heavily on student workers, often called student assistants, it makes sense to honor these students and include them in library fund raising activities. These students perform a variety of valuable duties, including shelving books, working at circulation and reference desks, working in technical services (acquisitions, cataloging, processing, and serials), assisting in special collections and university archives, and helping in systems departments.

Once these students graduate, they affiliate with their major department, or with the university as a whole. They often do not feel allegiance to the library. Yet, there are ways to change this fact.

One strategy for change, is to plate books in honor of graduating students who have worked in the library for a minimum amount of time. Selecting a book in the discipline of a student employee who has worked in the library for several years, and then plating the book in the student's name as a graduation gift and lasting tribute from the library, can establish a long-term relationship with that student. Benefits include helping to make the person feel "connected" with the library. This is helpful when the library embarks on future fund-raising activities, because there is likely to be a positive response from the student. In addition, the library sends a powerful message to its student employees that they are valued, appreciated, and remembered.

Outreach to Athletes

Several libraries have developed innovative relationships and partnerships with campus athletes and athletic supporters.

At the University of Wisconsin-Madison, librarians have established an e-mail reference service with university athletics to help them complete their assignments and coursework. This special relationship has helped the athletes to reduce their feelings of isolation on the campus, contributed to their academic success, made use of the library a less intimidating experience, and developed a positive image of the undergraduate library.

Another successful partnership between the university library and the campus athletic program is the "Baskets for Books Program" at the Madden Library of California State University, Fresno. After basketball coach Jerry Tarkanian and his wife Lois established a book fund for the Library in 1998, the following year they decided to create a new fund raising program, "The Baskets for Books Program." For every point the university basketball team scores during the season, dollars are contributed to the library from individual and corporate sponsors. In one year, a check for $10,000 was presented to the university library.

Cultural Offerings

Libraries are natural places for hosting campus cultural events, whether in the form of the visual, spoken, or performing arts.

Libraries with spacious lobbies or large public meeting spaces can benefit from collaborating with campus music departments to host recitals, cultural performances, or arts and lectures series.

At the University of California, Los Angeles, music concerts are held in the rotunda of Powell Library. These concerts feature student and faculty groups from the Departments of Music, Musicology, and Ethnomusicology.

During the Spring 2001 school session, the free concerts were scheduled in the late afternoon, and were open to the public. Performances featured a vocal quartet, a classical guitarist, an Early Music Ensemble, and ethno-musicians performing music from the Philippines, Ireland, and Scotland.

Libraries can also host artistic works, either produced on campus or as part of a local or traveling exhibition.

The University Library Art Gallery in the Jean and Charles Schulz Information Center at Sonoma State University contains approximately 1250 square feet of space to display art works created by students, professional artists, selections from the Library's collections, and material from traveling exhibitions. The University Art Gallery works closely with the University Art Gallery to ensure that exhibits demonstrate and maintain a level of quality characteristic of a university setting. In addition to the gallery space, display cases promote campus events, community cultural events, and library collections.

In addition, libraries are natural locations for public lectures and spoken arts events. Several academic libraries have established lecture, writer, and reading series in partnership with campus entities.

At Villanove University in Philadelphia, Pennsylvania, the library has created a unique distinguished lecture series for both the campus and surrounding community. The goal of the Falvey Library Distinguished Lecture Series is to emphasize the link between libraries, and creative and intellectual endeavors. The Lecture Series features speakers who have published outstanding works or who have been recognized for their professional achievements. Over a period of several years, speakers representing a range of disciplines will have taken part in the Lecture Series. In the fall of 2000, the library hosted a lecture, book signing and reception for Sergei Khrushchev speaking about his new book, *Nikita Kruschev and the Creation of a Super Power* (Pennsylvania State University Press, 2000) co-sponsored by the Russian Area Studies Concentration and the Department of History.

At Rice University in Houston, Texas, the Fondren Library sponsors the Robert Foster Cherry Contemporary Writers Series. A series of readings and lectures featuring poets, novelists, and playwrights. Recently, Pulitzer Prize winning playwright Edward Albee visited the campus.

At California Polytechnic State University in Central California, the Kennedy has been actively involved in hosting events related to "America Reads". At the 1999 *America Reads @ Cal Poly* event, more than 800 school-aged children, their parents, grandparents and friends came to the library for a "reading extravaganza" that engaged the entire community in promoting literacy. Honored guests and celebrities read passages from their favorite books which helped to raise more than $7000 in support of America Reads @ Cal Poly, part of a federal initiative created in 1996 to encourage young people to
read in response to studies which showed that many American youngsters fail to attain basic fourth-grade reading levels. The program inspires children to read, and engages the community in working toward this goal by training reading tutors, working with parents, and partnering with schools and the business community. The event was sponsored by the library in collaboration with the campus bookstore, the College of Liberal Arts, and the University Center for Teacher Education.

Information Technology Services

It is not uncommon for 21st century librarians to work in mid-20th century buildings. As a result, one of the most important partnerships for libraries to develop is with both the campus information technology services personnel (infrastructure, networking, telecommunications, etc) as well as with the office of facilities management. Both of these entities can help to transform, upgrade, and/or retrofit older buildings.

If it is not possible to change the structure of the present library building, a creative solution is to install a wireless network. This was the decision of the Library at California State University, Hayward. Not only was a wireless network installed in the library, but wireless laptop computers were made available to students and faculty members on a limited loan basis. The service has been well received by users, and the laptops allow connections to the campus network for users to access library electronic database subscriptions, send and receive email, or use any of the Microsoft Office applications, including Word, Excel, Access, and Power Point. Since the present library building is over 30 years old and has significant challenges in increasing the number of network connections for desktop computers, the solution of providing wireless laptops has been a welcome decision.

At the Tompkins-McCaw Library for the Health Sciences at Virginia Commonwelath University in Richmond, Virginia, the library is supporting the needs of health care professional in another use of wireless technologies-- Portable Digital Assistants (PDA). The library has organized various campus departments into PDA special interest group, and sponsors a listserv to provide opportunities for informal communication. Current uses of PDAs include keeping up with health care literature in e-books and e-journals, ready access to drug information, patient tracking, and investigations of the placement of an infrared beaming station to allow users to establish a direct connection to the campus network.

Increased demand for technological support has also led some libraries to consider a student technology fee when attempts to generate increased support from other entities has not been successful.

Such fees could fund infrastructure buildout to improve the responsiveness of the campus network (and in turn benefit the library's ability to deliver electronic resources), increase student access to equipment, expand hours of campus computer labs which may also be in the library building, create a student multimedia development center, increase the number of electronic resources offered through the library's gateway, promote technology literacy through the creation of library sponsored classes and workshops, upgrade computer-supported classrooms, subsidize the cost of networked laser printing, a provide remote access to resources, and support new services such as chat reference or virtual reference. By partnering with Information Technology Services, as well as with student government offices and student clubs, libraries can make the case for additional funds to enhance and expand these technological service offerings.

Cyber Café

Cafes in libraries have become more popular and prominent in recent years. As external "tenants" these cafes conveniently address the needs of users, and can often serve as additional needed revenue streams for the library.

At the Johns Hopkins University Library, a café in the lounge of the library has been positively received. In addition to receiving annual base rental income from the outsource food contract, the library has also been able to discuss receiving an annual percentage of the gross revenue. This has proven to be a win-win situation for all parties.

The Morton and Angela Topfer Library Cafe at Brooklyn College is another example of a cyber café. It is described as a state-of-the-art computer center that provides a place for users to browse the World Wide Web, send or receive e-mail, complete on-line assignments, access the library online catalog or a vairety of electronic sources (e-journals, reference sources, and databases), plug in a laptop, or have something to eat. It is open seven days a week, 24 hours a day. Fifty high speed networked computers are available, along with network connections for laptops. A snack bar in the cafe is open from 9:00 a.m. to 6:00 p.m., and vending machines are available after these hours to stimulate and nourish active minds. The electronic center was funded with a $1.6 million capital grant from the New York City Council, and is supported by a generous gift from a Brooklyn College alumnus.

Conclusion

These are but a few examples of creative and collaborative partnerships in which libraries have been able to monitor their environments and promote successful endeavors to further their institutional missions. Each exemplifies a strategy for promoting the library on the campus, creating an opportunity for additional revenues, and forging valuable relationships.

As noted by Bergquist, Betwee, and Meuel, there are multiple purposes for establishing partnerships. Academic libraries are in an excellent position to do so, taking advantage of the many opportunities which arise, as well as creating new opportunities.

In doing so, libraries can form partnerships to increase and expand services and programmatic offerings, provide convenient and timely access to technologically-based resources, enrich the cultural life on the campus, stimulate conversation and intellectual discourse, build bridges with the surrounding communities, and increase revenues to be able to accomplish even more.

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External partnerships

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Introduction

While partnerships between academic libraries and other organizations are not new phenomena, over the last two or three decades their importance has taken on new dimensions in many academic libraries. Perhaps the emergence in the United States of the OCLC cooperative systems, with their dependence on network service providers, and the need for collaborative development of integrated systems between libraries and vendors gave the biggest impetus to the emergence of the partnership culture here. It is important, however, to recognize that libraries have a very long and productive history of collaboration within their own culture, and it is this history that enables them to be so successful now with partnerships of various kinds.

In this presentation I will focus on external relationships, those relationships that develop between academic libraries and organizations and entities beyond the boundaries of the campus. I will be defining partnerships as those relationships, usually formal in nature, entered into by two more or less equal parties who have a mutual interest in accomplishing something and a mutual agreement to bear the costs of its accomplishment, although their reasons for doing so may be quite different.

I will talk about the reasons why academic libraries enter into these partnerships; typical partners in these relationships; what some of the management issues are that arise from partnering; and finally some of the ways of addressing these issues.

Why do we form them and who are these partners?

Perhaps the most common reason for an academic library to enter a partnership is the extension of services or resources that it can offer its primary user populations. Interlibrary lending agreements formed early on, and as the interlibrary loan apparatus became easier to use, became a standard tool to enable a library to offer access to more information resources to its users. Cooperative acquisitions programs had more trouble doing this effectively when we were tied to the print environment since a physical item could not be located in two places at once, and if you had it, I didn't!

Cooperative cataloging programs are partnerships as well with the agreement that if I catalog something, you don't have to, and vice versa, so partnerships were a way of extending our basic staff resources as well.

Partnerships between geographically close libraries permit interlibrary use, extending even physical spaces and promoting even more access for users. This has become more important recently with the explosion of distance education and distributed learning opportunities. In fact this has lead to partnerships far beyond the geographical areas we used to consider important as our students and even our faculty become more widely distributed, nationally and internationally. My own campus is now offering full degree programs both on the web and at various community college campuses around the state, and even in Mexico and other parts of the world and while we can provide many information resources through the network to these students, formal agreements with other libraries ensure both access to the technology that will enable them to use these resources, as well as to print based collections and study space.

A number of commercial distance education providers are now seeking accreditation in the United States, and accrediting agencies are expecting them to have formal relationships that will provide service and access to their distributed students. For some public academic libraries this is a financial opportunity in that they are already under some obligation to serve these citizens of their state, and the commercial distance education providers are willing to pay fairly high annual fees in order to have the formal agreements in place that the accreditors are expecting.

In many regions of the United States public higher education is being expected to take a more active role in solving the whole educational problem than before, and what began as kindergarten to eighth grade issues expanded rapidly to kindergarten to twelfth and kindergarten to sixteen and beyond issues. As part of a continuum in what has become a life long learning culture, academic libraries have begun to partner with k-12 schools to provide a more robust and effective information environment for boundary-less education.

The movement to partner with school systems has been spurred on by grant programs and state funding programs that bring financial resources to academic libraries to compensate for their participation, and these resources frequently underwrite technology or staff that supplement and strengthen the academic libraries infrastructure and capacity. An example of this from my own library has been a grant to produce curriculum materials for the teaching of Texas history in secondary schools throughout our very large state, a project which was underwritten entirely by a Texas foundation, and which has brought with it the funding to add important digital equipment that will be used for many other than its original purposes. In fact it is also enabling the digital distribution of an antique map collection nationally and internationally as a fall out from the project, a long-term goal for the library.

Universities are under considerable pressure to show relevance to their specific communities. Academic libraries, working with their counterpart public libraries, are able to offer expanded access to the community to high quality information resources beyond the capacity of the public library, and may in turn be able to provide access to their own primary users to more popular materials than they would ordinarily collect. In turn, libraries become participants within the university itself in adding value to the community's cultural and educational life.

Partnerships with the private sector have led to the development of numerous commercial products and services. Few integrated library systems exist that did not commence with an alpha test site and several beta test sites. Libraries gained from their ability to influence the direction of products and services and by financial incentives. Vendors gained by being able to bring more mature products to the marketplace that had already proven themselves in live situations. Entrepreneurial librarians have brought services to the marketplace through agreements with vendors, gaining significant financial resources for their libraries (or themselves!)

One of the most important partnerships today is in the realm of the rapid growth of consortia. While important for many years, today the power of the dollar, pound, or franc has made partnerships in purchasing and licensing electronic resources a critical strategic initiative. Almost all academic libraries today belong to one or sometimes many consortia specifically for the purpose of licensing electronic products at advantageous costs, and many vendors have negotiated creative agreements, which have brought significant funds into their coffers.

During the 1990s the academic library profession began to form partnership relationships with other information professions. One of the more successful relationships has been the Coalition for Networked Information, an alliance of academic librarians with academic information technology professionals. The Coalition, known familiarly as CNI, has sparked a number of collaborative ventures and brought these two interrelated professions much closer together.

The long history of libraries in partnering with each other has given libraries an advantage in working together in today's competitive arena.

What are some of the management issues?

Perhaps the most significant impact of partnering is the loss of control. A partnership involves the coming together of two agencies with somewhat different missions and priorities, and in order to work together, it is essential that there be given and take This means that the project or activity involved will be the work and the result of decisions by both parties, and at times academic libraries will need to "let go." If the partnership is formal, it may well be managed by an independent board made up of representatives of the partners. This board will make decisions that will not always be in the best interest of each partner, but which forward the initiatives of the partnership overall.

A good example of the loss of control is in consortial licensing. The consortium may negotiate a license that includes products that an individual library might not thing the most appropriate for its community, but which when considered as part of the overall license agreement is cost effective for the library. Taking the good with the bad, the wheat with the chaff is sometimes necessary in the partnership culture.

Some partnerships meet with resistance from staff or from the user community as not being in the best interest of the library. Political pressures or just developing collaborative relationships with new partners who can be important assets in the future may not be popular with staff if they see the cost as outweighing the benefits, but sometimes the long-term potential benefits do indeed outweigh current costs.

Partnerships frequently entail the commitment of venture capital resources, resources that are scarce for many libraries today, and so partnerships often bring with them risks. What if the partnership doesn't prove to be fruitful?

Another aspect of partnerships that presents management issues is the fact that two or more organizations, with different motivations, cultures, histories, and goals may have difficulty coming to agreement about activities. For libraries that are part of multiple partnerships, even the partnerships themselves can come into conflict. For instance licensing agreements may cause libraries to have the same products in more than one arrangement, and while this duplication may still be cost effective overall, it can lead to some difficult negotiations.

Finally, entering a formal agreement to partner and to commit financial and other resources reduces overall management flexibility. If in fact one has committed to a multi-year partnership of some kind, then the resources committed are not available should priorities change or reallocation of resources become desirable.

How can we deal with these issues?

The risks involved with partnerships are inevitable, and they mean that when a library is contemplating entering a partnership it is important for it to consider carefully all of the aspects of the partnership. What are the risks? What are the costs – all the costs? What are the potential benefits? Do the potential benefits outweigh the foreseeable costs? If not, it would be wise to reconsider the partnership.

If staff are going to be involved in the success of the partnership, it is important to have their buy-in at the beginning, so involving them in the development of the partnership agreement is important. Likewise involving the governing officers of the library and even users may be important.

Essential to success is a formal, written agreement – a legal contract – that spells out the commitment of the partners and the operating ground rules. How will decisions be made and by whom? What are the time limitations?

Is the partnership a fair one? This doesn't mean that each partner will get something of equal value, or at least of equal market value, but it does mean that the value to each partner of what it may gain is equal. If the only way to achieve something is by giving up something of perhaps a greater market value, it may still address a library's priorities to make up the difference.

Earlier I alluded to the loss of control that is a management issue. One of the clearest ways in which management may lose control is in the negotiation of consortial licenses. The agreements reached by a consortium board or management body may be untenable or impractical for a single participant. For instance, it is absolutely essential that all of my library's licenses permit off campus access through IP address control. By ceding control to a third party, I have less control over the exact license agreement that I do if my library is negotiating the license itself. If I am not prepared to accept the terms and conditions negotiated, I will find partnership unsatisfactory.

Conclusion

Partnerships present libraries with new tools to bring the most effective services to their users and the most affordable costs. They are a reality and will continue to be more than ever before. Libraries, because of their long history of collaboration and cooperation, are probably better suited to partnering relationship than any of their peer groups, and they should use that experience to their advantage. Caution in entering agreements is obviously important and it is more important than ever to read the fine print in every agreement, but partnerships certainly offer libraries exciting opportunities to expand the menu of services and resources to users and to maximize the impact of their financial resources.

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Reaching the unreached for library and information science education: a perspective for developing countries

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Abstract:

Open and distance learning is seen as a viable alternative to provide 'Education for all', particularly in the context of developing countries. The open learning is basically a philosophy while distance learning is a method of flexible education for the unreached –socially, economically, physically and geographically disadvantaged groups of the society. In a skill oriented discipline like library and information science, the circumstantial disadvantaged group is another group for opportunity for continuing education to enhance and upgrade their skills. Various models of distance education, based on the application of technology have been developed. In India, 5 open universities and 60 correspondence departments in other universities offer such education, the Indira Gandhi National Open University (IGNOU) at the apex. The paper analyses the efforts of IGNOU to reach the unreached. The models to be selected should be based on learner's requirement, their capability and infrastructure available to them. Development of multimedia and simulated courseware together with internship will be able to produce successful LIS professionals.

Preamble

The developing countries of the world are facing with the problem of providing education to all section of their people. The problem is multiplied for nations like India where rate of population growth is very high, resulting in growth of illiteracy rate. The reducing of the gap between illiterates and literates will eventually reduce the gap between two groups of people – rich and poor and ultimately two groups of nations – developed and developing. Many programmes like 'Education for All', 'Universal Educations' etc., have been undertaken to address the problem. Open and distance education system is considered as a viable alternative to take education to all for whom education remains unreached.

Development of Distance Education as a Viable Alternative for Education for All

In the present societal context, education through open university system is gaining importance and becoming popular throughout the world. The tremendous development in technology is challenging the basic foundation of traditional education system. There has been a paradigm shift in the teaching and learning methods, tools and techniques. During the last two decades or so, the complete dependence of teachers and taught on print media is being crumbled by other types of media – electronic, magnetic and optical media. The developments of high-speed communication technologies using satellite and fibre optics links are changing the face of classrooms – from four walls to without walls. The convergence of different media and communication technologies is ushering in a new era of educational system – from face to face teaching-learning to distance teaching- learning; from four wall classroom to virtual classroom; and from traditional university system to virtual university system. As Peter Drucker has predicted that after thirty years, there will not be existence of any university, as we understand it to day. The present big educational institutional campus will stand as a symbol of history. The entire structure of present higher education system will face a sea change in the years to come. From this, it is obvious that the experts have reservations about present traditional educational system and are pointing towards distance education system.

Distance education is not a new concept and should not be thought of as a development of this century. History shows that it was very much in practice in Europe during 19th century. Two educationists – Charles Thuzo and Gustov Langjensidth introduced the European languages teaching through the postal system. They were the first to establish distance education center in Germany. But modernization of distance education system was started in 1892 at Harvard University, where 39 different courses through distance education mode were started under the guidance of William Rainie. Towards the middle of twentieth century, this mode of education became popular and was wide spread all over the world, the important ones being in the countries like Russia, Sweden, Great Britain, Germany, France, Japan and Australia. In 1960, the worldwide figure of distance education learners at secondary level was around 10.6 million. In 1970, it increased to around 20 million(7). Not only the famous universities initiated distance learning centres, a number of open universities came into existence throughout the world. In addition to teaching in subjects like arts and humanities, social sciences, agriculture, journalism, nursing, home science and marketing, distance education was started in applied science, technology and medical sciences also. This trend of developed countries came gradually in developing countries also. In course of development of distance education system, different models/systems have been developed, based on the media and technology of delivery system. In developed countries, the technologies developed even for conventional education system are equally suited for distance education. In fact, use of such technologies in education is minimizing the conceptual framework of both the systems. In case of developing countries situation is quite different. Depending upon the extent of availability and accessibility, different countries are using different technologies/models for educating distance learners.

In the context of changed working environment during the last five-six years, particularly due to globalization and corporatization, the competition has increased in all spheres of society, particularly in employment market. Acquiring higher degrees has become imperative to compete and sustain in this changed environment. The need and relevance of distance education are naturally gaining more importance than ever before. The open learning system has added a new dimension to it.

Open Education Vs. Distance Education

The open education system is more a philosophy than the method, whereas distance education is a method of universalizing education. The origin of distance education can be traced to be started by correspondence course by St. Paul who used to write letters to individual churches and ask the local church elders to read them to their respective communities when they assembled for worship(1). The distance education, which, thus, started through correspondence courses, has traveled through various stages based on instructional methods, termed as generations or models(5). These generations/models are based on the nature of physical medium through which learners have facility to have access to education irrespective of space.

a) Correspondence Model
b) Model based on combination of different Media individually, Print, Audiotape, Videotape, Computers, Lecture through Radio, Television.
c) The Tele-learning Model – Interactive audio-video teleconference
d) Flexible Learning Model – Multimedia, Internet, Computer mediated communication.

The open education system implies that it offers the people the flexibility in educating themselves according to their choice irrespective of the barrier of space and time. "The entire idea of open university system is on a cafeteria system of education wherein everyone could take whatever they want without any hindrance"(10). The openness in open education system presupposes the availability of education – **anyone, anywhere and anytime** without social, physical and geographical restrictions.

The learner-centeredness is the key to the open learning system whereas it need not necessarily be the same for distance learning system. In fact, the learner-centeredness guides the structure, process, behaviour of open learning system through distance education mode(6). The success of distance education system depends upon its capability to:

a) develop need based programmes/courses.
b) develop usable study materials.
c) lay emphasis on public relations.
d) provide study materials to learners at regular interval.
e) develop infrastructure for proper counselling.
f) develop appropriate link between learners and study centre.
g) maintain punctuality in examination and result.
h) offer regular seminar and workshop.
i) maintain regular contact with traditional institutions.
j) develop mechanism for curricula revision and updating from time to time.

Open and Distance Education in India

India is a vast country of about 1000 million people with rich and diverse cultural heritage and a unique social conglomeration. Though, since independence, a substantial progress has been made in all direction including education, still the literacy rate could not be achieved beyond 60% at present. Open and distance learning is seen as a viable alternative to address to the problem for 'education for all'. This is pronounced in the National Policy for Education (1986) which states that 'the future thrust will be in the direction of open and distance learning'. This statement obviously points towards basic and higher education, aiming at eradication of illiteracy and developing manpower for scientific, technological and societal development of the country. In India, distance education method has taken a firm root in the education system of the country. The establishment of the National Open School, the Indira Gandhi National Open University (IGNOU) and the decision of establishing open universities in each state of the country are enough evidences of government's determination to boost the education system through open and distance learning mode. Many of the conventional universities have opened distance education departments in different subjects supplementing the regular courses. The open learning system for higher education is, thus, aimed to provide education to those sections of disadvantaged literate groups who aspire to have higher education but do not have access to conventional education system for some reason or the other. It is estimated that about 20 per cent of total enrolment in higher-education is in the open and distance learning institutions.

The institutionalized distance education system in India was first started in Delhi University in 1962 with the starting of School of Correspondence Courses. The establishment of first university for open learning in 1982 – the Andhra Pradesh Open University (a state level university) and also the establishment of Indira Gandhi National Open University in 1985 with Parliamentary enactment are a great leap forward in this direction. At present, there are 10 open universities and 62 correspondence/distance education centers (attached in conventional universities) functioning in the country, offering courses on various disciplines, the IGNOU being the apex body for distance education in the country(4).

Educating the Unreached

The purpose of open and distance higher learning is to take education to the under-privileged and also, unreached section of the society – the economical, geographical, physical and social. Majority of these sections, already having basic education, look for higher education for prosperity in the competitive employment market. Thus, in addition to regular education, a well planned continuing and lifelong education programme is vital for which open and distance learning method plays a significant role. Most of the countries – developed and developing are, therefore, considering it as a complimentary system with the conventional method of education. The changed economic policy and globalization of market demands more trained, skilled and educated workforce in a vast country like India. At the same time the conventional system of education are unable to respond to the requirement due to its inherent limitation to reach the unreached. Thus, the open and distance learning institutions have a major role to play for reaching the under privileged who constitutes majority of literate mass.

Reaching the Unreached – The Methods Followed in India

To reach the unreached, the delivery mechanisms followed for the programmes in open universities in India are:

a) Print materials
b) CD-ROM based materials
c) Audio-video tapes
d) Face to face counseling and practicals at study centers
e) Teleconferencing
f) Interactive radio counseling
g) Digital learning through Internet and Web-based (for Computer Courses of IGNOU)
h) Contact program through electronic mail
i) Seminars and Workshops
j) Virtual Campus Initiative (IGNOU is in process of establishing 14 Tele-learning centres for its computer courses)
k) Evaluation through assignments and examination in conventional mode.

Who are Unreached in LIS

The reason for initiation of open and distance learning system in developing countries is different than that of developed countries. In case of developed countries, it is more of technology driven whereas in case of developing nations it is need driven – the need for general education of huge number of illiterate people. This is evidenced in the education policy document. In case of professional higher education in developing nations, the open and distance learning is embraced as a necessary educational system aimed to produce skilled manpower to address the unemployment problem of these countries. Taking the example in India, the number of students registered in computer science, management studies courses and other professional courses are much more than the other disciplines offered under this system. To cite an example, among the total of 2,91,360 students registered in 2001 for 62 programmes (comprising of 67 courses) offered by IGNOU, around 66,000 registrants are in different computer courses and 14,680 in management studies courses. The under-privileged groups in professional disciplines for whom the regular education system is not accessible are slightly different from that of others. Considering library and information science as an example, the need for higher education is to acquire/enhance the skills required to meet the changing library and information market. In the emerging information and knowledge based society, the employment market is vast which the limited conventional education system are/will not be able to cope-up with. In view of the increased job opportunities in information market, the library and information science courses are considered as a prospective area for employment. Those who intend to opt for LIS courses comprise of two groups – graduates who want to choose LIS as their profession for increased job opportunities and those working professionals who intend to upgrade their knowledge and skills.

Thus, the ‘unreached’ groups in professional disciplines like LIS to be targeted for education are slightly different from other traditional disciplines. These constitute those who are:

a) geographically under-privileged
b) socially under-privileged
c) physically under-privileged
d) circumstantial under privileged.

The economically under privileged groups is not that prominent in this case, particularly for those working professionals who constitute the major beneficiary of this system.

Skills Required of LIS Professionals

The impact of information in all spheres of society coupled with the utilization of IT development for access and utilization of information are dramatically changing the face of the libraries and information institutions. Knowledge based societies are the reality of the near future where information and knowledge will act as a key to the development of a nation. The transition to knowledge based societies will be dependent upon the capability of creation and organization of information and knowledge. In this changing scenario, the custodian role of library and information professionals are changing to the role of facilitators and distributors. This change is very much visible in case of developed countries where the employment market constitutes different types of information related activities with a combination of traditional skills of library and information science and technological skills. The purpose of LIS education is to provide skills for developing professionals who link the people and information.

In the context of developing countries, at least for few years to come, many of libraries will continue to retain their traditional forms and activities, may be even with the application of IT. Apart from the traditional library related work, the emerging market of LIS professionals are in the area of information creation including communication and consolidation, user support, content development and management, information resources management and services, information system design and administration, information retrieval etc. Most of these require special skill development with varieties of practical input.

Reaching the Unreached in LIS – The Efforts of IGNOU

The LIS education in India through open and distance learning mode was started in 1985 with the offering of Bachelor's in Library and Information Science course by Andhra Pradesh Open University (now B.R. Ambedkar Open University), followed by the Bachelor's Degree programme started by the Indira Gandhi National Open University (IGNOU). At present, five open universities at national and state level are offering library science courses at various levels. In addition, out of more than 100 universities offering LIS programmes, 21 correspondence/distance education departments of conventional universities are also offering LIS courses at various levels. It is estimated that about 4000 students are turned out annually by the open universities and other distance education departments. The IGNOU at present conducts Library and Information Science Programmes at Bachelor's Degree (B.Lib.I.Sc., started in 1989) and Master's Degree (M.Lib.I.Sc., started in 1994) level. Besides, three more programmes – Ph.D., Certificate in Library Automation and Networking (meant for junior level working library professionals) and Post Graduate Diploma in Library Automation and Networking (for senior level working professionals) are under development.

The mechanisms followed in conducting these courses are:

1) Printed study materials.

2) Direct contact programme for a specific period of time at the study centers/ programme specific centers, spread all over the country. At present, there are 69 such centres for B.Lib.I.Sc. and 25 programme specific centers for M.Lib.I.Sc. courses, located at various places.

3) The practical components of these courses are conducted at the study centers/ programme specific centers. These centers have either been provided with or are already equipped with necessary infrastructure and tools required for practical work – a compulsory component of the courses. For the courses where practical work is not required, the students have to offer seminars on a topic related to the courses.

4) To supplement the study materials, each study center is equipped with a library for facilitating further reading.

5) In addition to print materials, audio, video tapes and video in CD-ROM, prepared for specific courses, are made available to the learners either at the study centers or through sale.

6) Interactive radio counseling from time to time as a back-up contact programme. Recently, a 24 hours educational network of local FM radio stations – Gyan Vani, dedicated to education has been launched.

7) Interactive Teleconferencing
The teleconferencing is conducted in interactive mode (phone-in counseling and teleconferencing) from 38 cities in India through Gyan Darshan, the 24 hours educational TV channel of India.

8) E-mail facilities for interaction with the faculty members as and when required.

The last three mechanisms mentioned above facilitate the students to have contact even from the home.

9) The evaluation methodology followed is a continuous one through assignments throughout the session and term-end examinations, conducted twice a year. A student may complete the courses within a span of four years.

Following tables show the number of students registered, passed in the two courses and the social background:

Table 1: No. of Students Registered and Passed in B.Lib.I.Sc.

Year	No. of Students Registered			No. of Students Passed (Percentage)
	Male (Percentage)	Female (Percentage)	Total	
1992	821 (57)	623 (43)	1444	554 (38)
1993	812 (55)	658 (45)	1470	504 (34)
1994	734 (57)	518 (43)	1282	405 (32)
1995	702 (56)	542 (44)	1244	423 (34)
1996	725 (54)	616 (46)	1341	473 (35)
1997	701 (54)	588 (46)	1289	425 (33)
1998	620(50)	617 (50)	1237	-
1999	700 (45)	887 (55)	1587	-
2000	930 (41)	1323 (59)	2253	-
2001	1483 (41)	2165 (59)	3648	-
Total	8228 (49)	8567 (51)	16795	-

Table 2: No. of Students Registered and Passed in M.Lib.I.Sc.

Year	No. of Students Registered			No. of Students Passed (Percentage)
	Male (Percentage)	Female (Percentage)	Total	
1995	419 (51)	402 (49)	821	237 (29)
1996	291 (46)	339 (54)	630	172 (27)
1997	276 (45)	342 (55)	618	-
1998	225 (47)	255 (53)	480	-
1999	211 (47)	242 (53)	453	-
2000	263 (43)	343 (57)	606	-
2001	400 (44)	504 (56)	904	-
Total	2085 (46)	2427 (54)	4512	-

The number of students registered in the B.Lib.I.Sc. programme shows a steadiness in growth from 1994 to 1998 (Table 1). From 1999, it shows a substantial increase because of the fact of relaxation in entry requirement. Though in terms of percentage, the male students admitted are more or less the same since1999, the growth in terms of numbers are substantive. In case of female students, there has been a steady growth both in terms of numbers and percentage since 1997. The percentage of students passing the programme varies between 32-38 per cent which means that drop out rate is above 60 per cent. The pass out figures for students admitted since 1998 have not been shown, as still they have the opportunity of completing the programme within four years.

As far as M.Lib.I.Sc. is concerned, the trend is more or less the same as in B.Lib.I.Sc. However, the pass percentage in all these years is below 30, indicating that drop out rate is more here (above 70%). The drop out rates in both of the IGNOU programmes are quite low. In the absence of any study to find out the reasons thereof, it is difficult to point out to any reason thereof.

The students registered in 1998 and 1999 and so far passed in B.Lib.I.Sc. are 347 and 247 respectively, whereas in M.Lib.I.Sc. it is 97 and 30. This signifies that the learners prefer to complete the programme according to their convenience (within a span of four years). One significant feature to be noticed is that there is almost 50% increase in admission in 2001 over the previous year in both the programmes.

Table 3: Social Category-wise Distribution of Registrants in B.Lib.I.Sc. and M.Lib.I.Sc.

Year	B.Lib.I.Sc.				M.Lib.I.Sc.			
	Social Category*			Total	Social Category*			Total
	PH	BC	General		PH	BC	General	
1996	16(1%)	301(22%)	1024(77%)	1341	94(15%)	59(9%)	477(76%)	630
1997	0	150(12%)	1139(88%)	1289	NA	NA	NA	NA
1998	44(4%)	527(43%)	666(53%)	1237	9(2%)	174(36%)	297(62%)	480
1999	9(0.5%)	368(23%)	1210(76%)	1587	3(1%)	370 (82%)	80(17%)	453
2000	18(1%)	472(21%)	1763(78%)	2253	7(1%)	128(21%)	471(78%)	606
Total	87(1%)	1818(24%)	5802(75%)	7707	113(5%)	731(34%)	1325(61%)	2169

* PH – Physically Handicapped, BC – Backward Class, NA – Not Available

One of the objectives of open and distance education system is to provide education to the disadvantaged groups of the society. The above table shows, how far IGNOU has been able to provide LIS education to such disadvantaged groups. One fourth of registrants in B.Lib.I.Sc. and more than one third of registrants in M.Lib.I.Sc. are from two disadvantaged groups of the society – physical and social. The overall percentage of registrations in B.Lib.I.Sc and M.Lib.I.Sc. programs during the last five years for this group are 25 per cent and about 40 per cent respectively. In terms of physically disadvantaged and socially disadvantaged registrants, physically disadvantaged group comprises of 1 per cent in B.Lib.I.Sc. and 5% in M.Lib.I.Sc. programmes whereas the socially disadvantaged (backward classes) groups of the society comprise of 24 per cent and 34 per cent for B.Lib.I.Sc. and M.Lib.I.Sc. programmes respectively. Though the registration of general students is more in both these programmes, in M.Lib.I.Sc. programme, two disadvantaged groups accounted for 83 per cent registration in 1999.

The break up of admission data according to social groups shows that open and distance learning provides a good opportunity for education for disadvantaged learners for whom the traditional system may not be available easily.

Distance Education in LIS – Issues for Developing Countries

Any professional disciplines are skill oriented. The students are to be made equipped with the skills required for the prevalent job market. Taking the example of library and information science, it is a service-oriented profession, the basic ingredient of which is content, information and users. The techniques of content/information organization and providing services vary from situation to situation, for which the practical exposure in actual work environment plays an important role in capacity building. This is in this area where the traditional courses have the advantages of providing hands-on experience on actual work environment. The problem arises how to impart the skills in distance mode. Possibly, that is why offering of courses in professional disciplines is not as wide as in the others. The limited number of contact programmes in the study centers may not be adequate in developing skills. At the same time, contact programme from a physical distance such as audio, video and interactive counseling may not make a student thorough amongst in the methods and techniques of intricate aspects of the subject.

The factor that affects the successful implementation of LIS education through distance mode is the extent of providing exposure in the actual working of libraries and information centers and providing hands-on experience to acquire the skills.

Though, the distance education methodology has travelled through four generations/ models based on prevalent available technology of delivery system and its applicability. These models emanate from developed countries. Application of these models in developing countries is dependent upon various factors such as, available infrastructure, learners' capability in handling the technology and access facility of learners. Same model may not be useful and practicable to all, depending upon societal situations. Neither, a particular model be useful in all courses, even within an institution offering different courses. Basically the first three generation techniques/models which comprise of print, combination of media and computers are followed by different distance education institutions in India. The situation in other developing nations need not be different. The impediments which put hindrances for adoption of the latest model are lack of:

a) accessible facilities of technology based delivery by learners.
b) capability of learners to use the technology.
c) availability of technological gadgets for the learners.
d) courseware using the fourth generation technology.
e) faculty competence to develop technology based courseware.

These are the general problems which the open and distance education system in developing countries are facing to implement the model for reaching the unreached. Depending upon the situation, the developing nations have to make a choice of existing model(s) or develop an alternate one which suits the conditions.

In case of LIS education, if the learners of the system are to compete in the employment market, the model has to be based on developing such a system where media based learning model and working in a practical environment converges. This problem may be minimized with the development of modules using the IT, say developing interactive multimedia courseware, simulated courseware etc. The critics of distance learning systems points to the inadequacy of the system as far as practical skill aspects are concerned. In many cases, the distance learners are not treated at par with conventional learners in work environment.

Depending upon existing social conditions in developing countries, it is felt that dual mode delivery system for distance education – print based and other media based will continue at least for some years to come till the time the learners develop skills to handle interactive multimedia based technology.

In addition to development of simulated practical courseware, the inclusion of internship programme in LIS courses as a compulsory component should be able to produce successful library and information professionals, even through open and distance learning method. Continued evaluation and research on discipline based delivery system and its efficiency will enable to develop appropriate model useful in a particular context.

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Impact of Internet on Schools of Library and Information Science in Thailand*

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Introduction

This paper aims to show how Internet has been integrated into and has affected schools of library and information science in Thailand. Its also suggests some guidelines for strategies to ensure that schools of library and information science, not only in Thailand but in other developing countries, can continue to meet the challenges posed by increasing use of information technology and results such as globalisation.

Internet has been widely used in libraries since its beginning and it has affected all aspects of library and information work. Mainly, Internet is used as a tool for access to information resources (Wang and Cohen 2000). It can be said that Internet has changed the fundamental roles, paradigms, and organisational cultures of libraries and also the role of the librarian (Pascoe, Applebee, and Clayton 1996; Saunders 1996; Abbas 1997; Note 1997). As a result, librarians and other information professionals have been affected by the change in their roles, knowledge, skills and competencies (Rowland 1998, Klobs 1996, Creth 1998, Rice-Lively 1997, Nobel 1998, Matson and Benki 1997, Abbas 1997, Woodworth 1997; Marshall et al. 1996). It is anticipated that the change of librarians' roles and competencies would directly affect library and information science education to produce a new type of information professional. Most schools of library and Information science and library educators seem to have a positive response to the changes. They try to find ways to adapt their own programs such that they not only attract new students, but also equip them with the ideals, values, and skills combining library and information concepts with the demands of society in the new age (Tomer, 1994; Pollicino 1999).

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Research by Wittig and Wolfram (1994), Beheshti (1999), SLA (1998), and Spink and Cool (1999) has revealed that library and information science schools are keeping up with the rapid changes that are taking place in information and communication technology. They have adapted themselves by changing the names of the programs or have revised their curricula, added new subject courses and extended their educational aims, or created new programs by merging with other schools. Information technology concepts and applications are mostly covered in all areas of LIS program. They affect every aspect of the curriculum. The newer areas such as database development, mathematical methods, electronic resources, Internet access tools, electronic libraries, and information and knowledge management, have been gradually moving up and increasing in large scale in the curriculum area. Together, networking and Internet concepts and resources have already found their way into many courses throughout library and information science programs and also tend to play an important part of subject contents in the courses and tools for teaching and learning activities (Wittig and Wolframe,1994). This has lead to a new type of education in the field, for example it is called " digital library education "in Spink and Cool's work. They also suggested that the digital library educational model and contents should be integrated into the library and information science curriculum area (Spink and Cool 1999).

However, this change can be clearly seen in only the United States, Canada and some of the developed countries. Because in these countries the status of technology and telecommunication infrastructure are advanced and has strongly impacted on the number and types of libraries they have, which also affects the foci of library and information science schools' programs. It can not be generalised to other countries, which have a different situation in relation to the advancement of technology development. These conditions may lead to the conclusion that studying the impact of Information technology, including networking and Internet, on library and information science education in each part of the world, is necessary. Based on these reasons, this study was conducted in Thailand. It is anticipated that the results of the study may be able to be used in the countries in South East Asia which have similar information technology circumstances, economic status, and culture.

Framework of study

The study framework was based on the concept of systems theory and implementation of innovation in organizations. Its is described in system terms and focuses on the process of putting inputs into the system (social system or organization system), the way inputs are processed by social organizational function, and outputs that are produced. When input factors are transited into the system for producing outputs, on going the process of the system, they will affect system structure or components such as the people, the working process, attitudes, behaviour of people etc. Consequently, they will impact on the goals of the system and produce new outcomes from the system (Ritzer 1996; Peerasit 1998; Roger 1995; Wigand 1996). Using the concept of the system in the research framework, *Internet* is defined as an input innovation which be put into system process of schools of library and information science, and whose their structures and working process are described as part of system.

Impact is defines as the implementation of Internet in the library and information science schools. It may lead to change in the schools' structure and functions such as curriculum structure, teaching-learning process, and staff 's knowledge and skills. These changes may lead to change in their outcomes (graduates and their new competencies) and lead to the creation of a new direction for schools of library and information science.

Research design

Survey research with cross sectional design was selected to conduct this research. A combination of questionnaires, interview, and document analysis methods was used for collecting data. The questionnaires for 146 academic staff in 16 schools of library and information science, were sent to heads of the schools with an official letter from the Dean of the Faculty of Humanities and Social Science, Khon Kaen University, to request cooperation in distributing the questionnaires to the staff in the schools. Two or three weeks later, the researcher went to each of the schools to conduct the other research activities such as interviews, observation and collecting documents concerning the schools' programs and curriculum. It took about one or two weeks field work for each school. During that time, questionnaires were collected. If the staff had problems about the questions, the researcher could answer directly. 125 questionnaires, 85.6%, were collected. When they were edited, 118 questionnaires, 80.8%, were complete, 4.7% were incomplete. The main problem was that these respondents have had little experience of Internet, therefore they did not understand the contents of the questionnaires and were not able to answer.

The researcher interviewed 16 heads of schools of library and Information science during June – October 2000, to collect data about the schools' management, technology and Internet situation infrastructure in the schools and the perspective of the heads of the schools concerning the use of Internet in the schools. Also, document analysis was used to analyse 16 undergraduate and 9 graduate curricula in library and information science to extract information about the integration of Internet into the curriculum.

The data were statistical analysed by using the SPSS package for both descriptive statistics such as frequency, percentage, mean, standard deviation, and the correlation test among the variables by chi-square. The main purposes of descriptive analysis were presenting the current situation in relation to characteristics of the schools, academic staff demographic data, technology and Internet situation, and the situation of Internet use in the schools. The correlative testing among the variables and contributing case comparisons were extracted to find explanations for the differentials in the impact of Internet among the schools.

Research results

Change in library schools

The author's research has show that the schools are keeping up with the change in information and communication technology in Thai society. Some have changed the names of the programs and some have reviewed and updated their curricula especially since 1997 (see the data in table 1). It can not be said that they changed because of Internet, but have been forced by new information technology changing the way people communicate, learn and use of information, addition with the need of marketplaces. Professionals are now needed who can think conceptually and reason logically, using both that knowledge and advanced technologies to deliver the information services needed by society (Stueart 1999). The dominant change in curricula in Thai schools of library and information science is the addition of more courses and credits in the technology area. It may say that in Thailand, the name of the program is of greater significance than in some other countries. It is obvious showed significant correlation with the number of credits and courses of information technology area in the curricula and also the information support in the schools (see data in figure 1).

Table1. The name of the curriculum clarified by the period of development or revised before and since 1997

The curriculum which be developed or revised before 1997	No.	**The curriculum which have been developed or revised since 1997**	No
Library science	1	Library and Information science	4
Library and Information science	3	Information studies	2
Information studies	2	Information science	3
		Information Management	1
Total	6		10

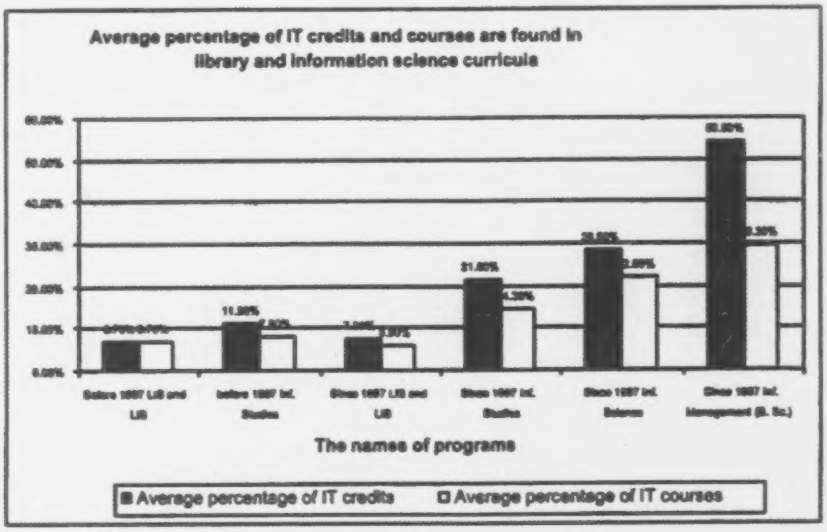

Figure 1

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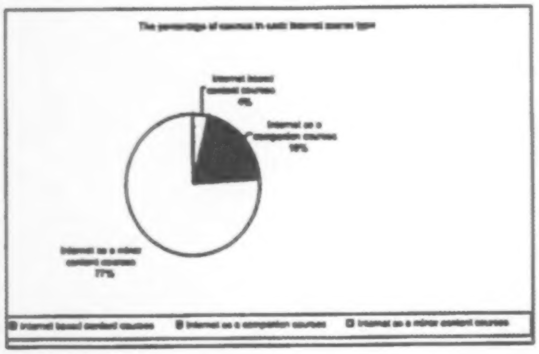
Besides changing the names of the programs and adding information technology courses, Internet has been also integrated into library and Information science curricula as a part of subject contents. About 47% of the courses have taught Internet as part of their contents. Most of them are teaching Internet contents as minor (Internet contents are less than 50% of the course contents), only 4.2% have Internet as the major component or Internet based courses, most of them are courses in information and storage and retrieval and information service areas (see data in figure 2)

Figure 2



Staff use of Internet

Internet is mostly used by academic staff as a tool for information access, and information resources for teaching preparation, research and academic work. It forms part of the content in library and information courses, especially in information service, information resources, and information storage and retrieval areas. However, the use of Internet and knowledge of its advantages are significantly correlated with the age of the academic staff as well as their knowledge, skills and experience in using computers and Internet (see data in figure 3,4 ,5)

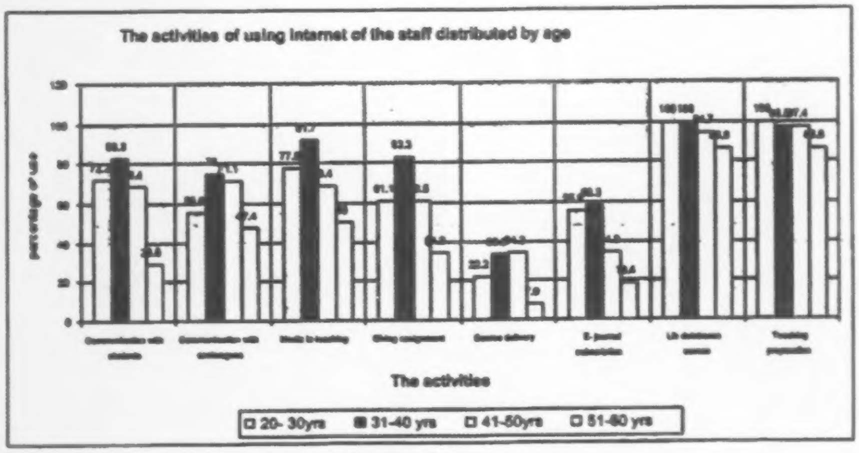


Figure 3

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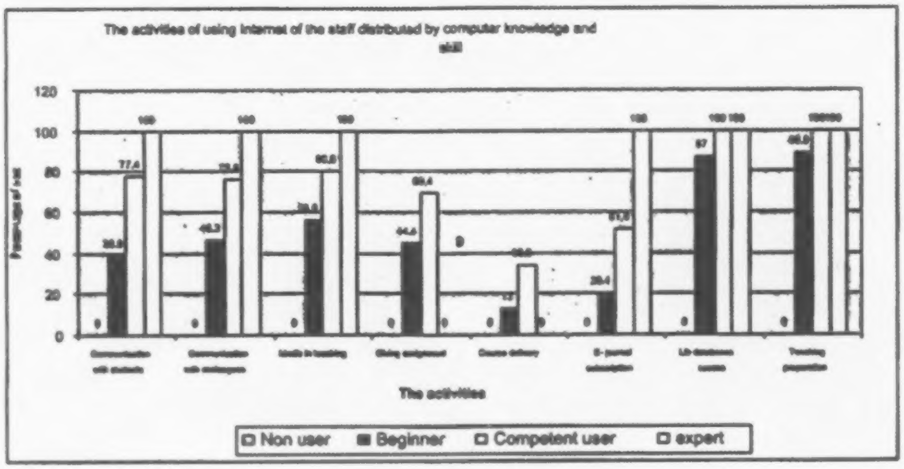

Figure4

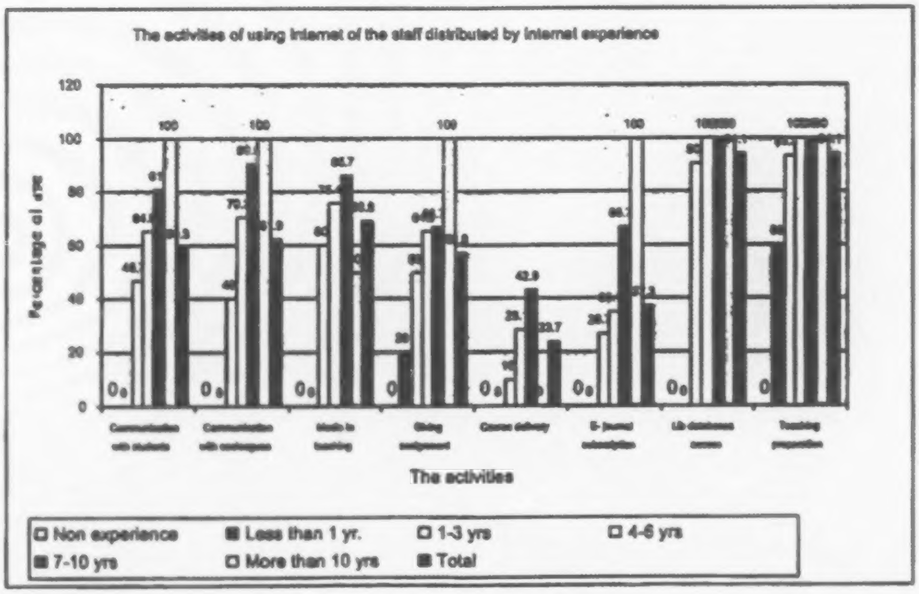

Figure 5

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Internet infrastructure and support

Although information technology and Internet have been integrated as important parts and features of all library and information science curricula, the situation regarding information technology support in the schools is very different. Eleven schools were classified in the group insufficient technology support for teaching/ learning activities and for staff use. Of these, almost half have poor infrastructure and support (data in table 3). However, it is the schools which have developed vision or goal statements in relation to information technology, as well as schools which are located in universities having policies for information technology based teaching and learning, that have good information infrastructure and support (data in table 4). This demonstrates the importance of having heads of schools who have vision and can set appropriate goals. Equally important is the communication of these visions or goals to the staff, university administration and the public.

Table 3. Current situation of Information technology and Internet use in schools of library and Information Science in Thailand

IT Group	No of schools	No. of comp.	Computer provided for staff	LAB (yes)	LAN (yes)	Internet (yes)	Number of computers connected to Internet	Website (yes)
Group I Sufficient support and providing information technology infrastructure	5	27-68	Computers individually provided in the offices	5	5	5 (All 6+ years))	27 -68	5
Group II Insufficient infrastructure and support	4	6-30	Shared access with other staff	4	3	4 (3 for less than six years)	6-30	2
Group III Very insufficient infrastructure and support	7	1-9	Shared access with other staff	no	3	6 (All less than six years) in use all)	1-5	no
Total	16 (100.0)	16 (100.0)		9 (56.3)	11 (68.8)	15 (93.8)	15 (93.8)	7 (43.8)

Table 4 the number of schools in each visions group cross- tabulated by IT groups

IT groups	Vision groups			
	None	Not mention about IT	Universities' IT based teaching and learning	Schools' visions on IT
Group I : Sufficient support and providing information technology infrastructure	-	-	3	2
Group II: Insufficient infrastructure and support	1	3	-	-
Group III: Very insufficient infrastructure and support	3	4	-	-
Total	4	7	3	2

Recommendations

According to the research findings, Internet has been widely used in schools of library and information science in Thailand, but the conditions of use are varied depending on information technology situation and support. Therefore, there are some suggestion for strategies to ensure that schools of library and information science can continue to meet the challenges posed by increasing use of information technology and Internet.

1. **Recruitment of future heads of the schools with vision and good communication skills.** Head of school with good vision in IT and information profession is very important for current situation of schools of library and information science in Thailand, because the change of professional demand in the society. However, to recruit a kind of person is not easy in Thai universities, most of academic staff do not want to be heads of school, they want to deal with academic work more than administrative work. It may have more possible opportunity, if the universities offer more promotion and support both in higher position and salary for the position. The other possibility is training staff members in administrative and planing strategies. If they get more understanding about the importance of vision and goals in administrative work, it will be helpful for the heads of school in setting appropriate goals as well as communicating with them.

2. **Provision of equal education**. It is anticipated that difference in information technology conditions and support among the schools, will result in differences in the education received by their students. Therefore, the research proposes the concept of Web- based learning for sharing information and for teaching courses between library schools in Thailand. Those schools, which have good information technology infrastructure and support, could act as host webs or media for providing course contents to students and staff or other less well- support schools. Internet could be used as an effective communication media to assist in providing equal education in library education throughout Thailand.

However, it is not easy to create a big project with spend amount of budget in Thailand, especially in economic crisis situation, but if the project can give more benefit to majority group of people, the Ministry of University affairs will be considerable. Moreover, the project can firstly start in some parts or a small group such as a group of the schools in Bangkok or a group of the schools in a regional area, and later it will be extended to the others.

3. Staff training. Data from the research has shown that there is a linear relationship between knowledge and skills in using computer and Internet use of Internet service and use in teaching and learning process. The study also showed that a high percentage of academic staff, especially senior staff, are beginners in using computer and Internet. It is suggested that training programs and workshops in using the Internet in teaching and learning are needed. Senior staff who finished their education many years ago, and have not experience in libraries or information centres in the new information technology environment, should be provided with opportunities to train or observe in the workplace.

Acknowledgments.

I would like to express my thanks and gratitude to my supervisor, Associate Professor Peter Clayton and Dr. Trish Milne, for their very high standard and available guidance and care. My special thanks to Mrs. Adela Clayton, who has provided helping in English correction and given me moral support during my difficult time of my study and living with her family. I also would like to thank to University of Canberra and Khon Kaen University for kindly giving financial support and scholarship.

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Abstract

The paper looks at how Internet has impacted on the schools of library and Information science in Thailand, focusing on how it has been used and leading to change in teaching learning process, curriculum and the programs. 146 questionnaires were provided to the academic staff in 16 schools of library and information science together with interviewing 16 heads of the schools, and curriculum analysis. Results of the study show that the library and information science schools in Thailand are keeping up with the changes in information and communication technology. Their programs have been changed, especially since 1997; some of them are changing the name of the programs to information studies, Information science or information management. The data also indicates the correlation between the name of the programs and the number of courses and credits in information technology and Internet in the curricula, and with information technology support from parent universities. In addition, the visions or goals of the schools were found to correlate with Information technology and Internet support. Internet is already used in the library and Information science curriculum, in the teaching learning process and its contents are taught as a part of subject contents in library and information courses, especially in information service, information resources, an information storage and retrieval areas. However, the use of Internet in teaching learning process of academic staff shows significant correlation with their age, and their knowledge, skill and experience in using computers and the Internet.

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Interaction and student retention, success and satisfaction in web-based learning

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Abstract:

Research is being conducted at the Florida State University School of Information Studies to determine the importance of interaction (teacher-student, student-teacher, student-student) to the success of web-based learning graduate degree programs. Success will be measured in terms of retention, student satisfaction, and learning outcomes at three intervals: (a) completion of an individual course; (b) completion of the degree program; (c) one year following the completion of the degree program. Understanding the importance of interaction is crucial to understanding why students do or do not successfully persist in web-based learning. This understanding can be used to guide decision-making in a variety of areas related to the delivery of individual distance courses and entire degree programs.

This study consists of two parts: I. A detailed examination of the graduate web-based distributed learning degree program of the FSU School of Information Studies; and II. A comparative survey of comparable Information Studies web-based distributed learning degree programs in North America. A pilot study was conducted in Fall 2000 and data collection for Part I is currently underway, with projected data collection completion by August 1, 2001.

Statement of the Problem

Much has changed since postmen served as the vehicle by which distance education reached the student in the 19th century, including the fact that it is as likely that a woman will deliver your mail as a man today. In the 19th century, commercial correspondence colleges provided distance education via the mail to students across the country. The 20th century continued the trend of distance education with the inventions of radio, television and other media. Students today experience education at a distance through significantly different formats of delivery. They no longer wait for the postman to bring assignments and correspondence from an instructor, or gather around a television in a central location, but may simply turn on a computer, check their e-mail, an electronic bulletin board, or spend a few minutes on I-chat. And, today, distance crosses geographic boundaries, with students from around the world registered together in courses.

The utilization of new technology in providing education has raised concerns regarding interaction of learners and instructors. Must students and teachers be face-to-face to interact? What does interaction involve? How does online interaction compare with face-to-face interaction? Does more frequent interaction contribute to success? What roles do intensity and topicality of interaction play?

The Research Question

A study underway at Florida State University seeks to explore these concerns, and particularly, to answer the question:

- **Is high interaction positively correlated with student and program success in graduate web-based distributed learning degree programs?**

Establishing whether or not high interactionas measured in terms of frequency, intensity, and topicalityhas a positive correlation with success in web-based learning is a crucial first step to moving beyond the "no significant difference" debate that has characterized the research on the effects of media on learning since the 19th century. debate (Russell 1999, and see **Review of Pertinent Literature**, below) Web-based learning is enjoying a popularity unprecedented by earlier distance learning delivery modalities. As reported in the March 30, 2001 *Chronicle of Higher Education*, the enrollments in Internet courses at the University of North Texas alone increased by nearly 300% between Fall 1999 and Spring 2001 (Young 2001), and other institutions are reporting similar enrollment growth. Clearly research needs to move beyond comparative media studies to an examination of the key elements that may contribute to success or failure. Interaction is frequently cited as one of these key elements.

Significance of the Research

This study seeks to determine the importance of interaction to the success of web-based learning graduate degree programs. Success will be measured in terms of retention, student satisfaction, and learning outcomes at three intervals: (a) completion of an individual course; (b) completion of the degree program; (c) one year following the completion of the degree program. Understanding the importance of interaction is crucial to understanding why students do or do not successfully persist in web-based learning. This understanding can be used to guide decision-making in a variety of areas related to the delivery of individual distance courses and entire degree programs.

Graduate professional education in Information Studies was chosen for this study in order to ensure specific applicability to the information technology area where the projected demand for education will far outstrip our universities' traditional classroom resources. Thus, this study contributes to the solution of a national concern some consider to be of crisis proportions. According to a 1999 U.S. Department of Congress report, growth in the IT sector will increasingly lead to differentiated educational demands.

First, there has been sustained rapid growth in the demand for highly-skilled IT workers—demand that has accelerated in recent years. This demand is the product of the Information Age—virtually every segment of the American economy has em-braced IT for the productivity improvements it brings to existing business functions, as well as for the new capabilities, products and services IT enables. The ubiquity of IT can be seen almost everywhere: in the shift of business's equipment investment into information technologies, in the unprecedented emergence of the web as a venue for commerce and communication, and in the proliferation of computers in busi-nesses and homes to name a few. As a result, demand for highly-skilled IT workers leads all other occupations and is expected to continue in the years ahead. Second, the variety and complexity of software and hardware products and their applications, together with the unique business requirements of each industry, have created "spot" demand for workers with unique combinations of IT skills, experience and industry knowledge—expressed often by employers as needing "the right person, with the right skill, at the right time." The combination of time-sensitive competitive pressures and limited-time need for employees with unique combinations of technical skills, business skills, and hands-on experience has led many employers to pursue "buy" decisions in this labor market, rather than "make" decisions (to hire, then train for the task). Thus while there is a need to address the growing demand for highly-skilled IT workers, there is the additional challenge of meeting the unique demands of this niche labor market. (Meares and Sargeant 1999)

Schools of Information Studies have already stepped forward to contribute to meeting the demand for IT workers and managers skilled in the intermediary role making vital connections between people and information at both the graduate professional master's degree and undergraduate levels. Staggering enrollment growth, however, will seriously impact these efforts unless new and innovative strategies, such as the adoption of web-based learning, can be developed and deployed with confidence. The Florida State University School of Information Studies experienced 500% enrollment growth from 1994 to 2000. We have successfully managed this increase through adoption of web-based delivery modalities, with approximately half of our current students at all levels receiving their education at a distance.

REVIEW OF THE PERTINENT LITERATURE

History of Distance Learning

An early proponent of distance learning was the Open University (OU) in Britain, offering a model for universities to observe and pattern their own programs. Over two million students have taken courses since 1971 through OU's virtual education model that uses various multimedia methods. The university offers personal tutoring and in some cases a weekend or weeklong class at a central location. For those who question the teaching methods, university officials note that the institution tends to rank high in national assessment. (Blumenstyk 1999) While there are proponents of distance learning, some educators are not so sure that technology makes a significant difference. The book, *The No Significant Difference Phenomenon,* is comprised of numerous articles that suggest there is little difference in methods of learning, but the studies do provide substantial evidence that technology does not denigrate instruction. This opens doors to use technologies to increase efficiency, bridge distances or circumvent other obstacles, yet assure the outcomes will be comparable to conventional classrooms or those employing the use of expensive, sophisticated technology. (Russell 1999)

Interaction in Distance Learning

The utilization of new technology in providing education has raised concerns regarding interaction of learners and instructors. Must students and teachers be face-to-face to interact? What does interaction involve?

There are generally three types of interaction that are considered aspects of a learning environment. They are:

- *Learner-content interaction* – the interaction of the student with the subject matter and the constructing of knowledge through new understanding.

- *Learner-instructor interaction* – the instruction, assisting, stimulation and support provided by the instructor to the learner. The learner can test the viability of new understanding with the instructor who serves as a representation of expert knowledge.
- *Learner-learner interaction* – the interaction between one learner and other learners whether alone or in a group. It may or may not be in the presence of an instructor. (Soo and Bonk 1998)

Synchronous and Asynchronous Interaction

With today's evolving technology, distance learning is vastly different from the days of gathering students around a television in a central location. It generally includes synchronous and/or asynchronous communication. Synchronous communication occurs when the student and instructor are present at the same time during instruction, although they may be in different locations. Asynchronous communication occurs when the student and instructor do not participate in direct person-to-person interaction at the same time or place. Other aspects of learning at a distance include activities or instruction where the learner is at a different location from the originator and a combination of media may be employed--such as computers, software, e-mail, telephone, fax, Internet, television, or videoconferencing--to facilitate learning. (Phipps & Merisotis 1999 #40})

Pedagogy and Interaction in Distance Learning

While the new approaches to teaching and learning are studied, the traditional methods of teaching are also being analyzed. Do traditional classrooms prepare students to be lifelong learners, adaptable to the demands of society, the economy or business requirements? How do the traditional methods and philosophies differ with education in an information-age environment?

Whereas teachers once lectured, they are becoming facilitators who guide, coach, and motivate. Collaborative learning is replacing an atmosphere of working alone and presenting one's "own" work. Group work is encouraged as it more closely emulates the way people work most often in the real world. Teamwork is encouraged as it provides different perspectives on issues, skills and ways to solve problems. Learning is becoming student-centered as opposed to the professor, library and other sources of information being at the center with students clustered around them for access or interaction. This allows the student to become self-directing in planning the acquisition of education. Therefore, key changes for education in the information age stress collaborative learning, interaction, and problem solving or reasoning rather than memorization. (Oblinger 1996)

Today's students expect and demand instruction with high levels of interaction between students and instructor and immediate access to information from around the globe. The demand for interactivity has placed a new focus on instructional design as well as the technologies that provide two-way delivery. Current technologies encourage students to be self-reflective as the flow of instruction may no longer be sequential and non-interactive. ({Parker 1999 #60})

Previous multimedia systems, known as second generation systems that included printed matter, television, audio or video tapes, limited personal interaction to one-to-one exchanges and were best suited for mass usership. However, use of network technologies, known as third generation distance education systems, have provided models that add to the social component of the learning process while constructing new knowledge. The systems create learning communities where individuals can overcome isolation and benefit from group interaction. This approach also encourages learners to take an active part in setting objectives, defining the contents and capitalizing on life experiences, requiring that the learning process hinge on strong interaction between all participants. {Trenton 2000 #70}

Current technology changes the social dynamics of education by placing everyone (learners and teachers) on equal footing. All learners have equal opportunity to post and read messages, thereby allowing for ideas from everyone rather than just the instructor. ({Kearsley 1997 #80} Carl Rogers, psychologist and educator, felt "teaching" was a vastly over-rated function and that educators were not there necessarily to impart knowledge but to facilitate and guide the learning process. A proponent of student-centered learning, Rogers believed students must learn how to learn, how to adapt to change and learn the process of seeking knowledge. {Rogers 1969 #110}

Faculty whose experience is limited to lecturing in a classroom may find themselves in an electronic learning environment using technologies they did not grow up with but their students did and are very comfortable with using the technology. They will be faced with learning new ways of interacting, facilitating student-centered learning and becoming a resource for information. ({McClure [undated] #90} Rather than continuing to lecture online, instructors will be more successful by adopting the role of facilitator or moderator who encourages participation and keeps discussions focused. {Kearsley 1997 #80}

Malcolm Knowles developed the andragogical model (helping adults learn) for education long before current technology existed but the concepts are a natural fit for student-centered learning in distance learning. He felt learning by adult students must be interactive and self-directing with the teacher being the facilitator. He suggested adult students wish to be self-directing, have valuable life experiences to draw upon, are ready and motivated to learn, but are especially drawn to task or problem-centered learning rather than subject-centered. (Knowles 1984)

Interactive or Collaborative Learning

Interactive learning, or collaborative learning is a natural outcome of distance education with technology providing many avenues for interactions between students, instructors and information. Students are encouraged to be involved in learning activities and participate in group projects since modern business is generally built on teamwork. Collaborative learning in online classes means students work together without knowing each other, benefiting them is a variety of ways:

- Everyone on the team is equal
- Barriers related to gender, ethnicity, age or shyness are eliminated
- Face-to-face time may become more efficient
- Online lecture notes and readings allow students time to reflect
- Utilization of time is more flexible at the convenience of the student
- Instructors can stay in touch with students when off campus ({Oblinger & Maruyama 1996 #50}

While the benefits of collaborative learning seem positive and easily accomplished with distance learning, every student may not be an expert user of the technology that implements the online class. Therefore, it is necessary for students to become acquainted with the technology before beginning the class. Also, some students may be slow in opening up to the group and participating, choosing to be a lurker in the background instead, while other students may exhibit a greater degree of boldness online. Establishing group sizes of no more than four may enhance interactivity, encourage more interaction, and facilitate efficient teamwork. ({Carnevale 2000 #120}

As each student is a unique individual with individual needs, there are many ways of implementing the methods and modes of distance education. The innovative instructor will be the one who utilizes diverse methods to facilitate learning. The value of distance learning and how it should be done has spawned considerable literature but there are still misconceptions regarding online education. A fear of losing interaction and the dynamics of face-to-face communication is felt keenly by many who value being able to see faces light up with "ah-ha" expressions or puzzled looks that indicate lack of understanding.

Some students begin with the misconception that online classes are easy, or at least easier than conventional classes, but find they require much more work than expected. Instructors report being concerned about conducting tests with the potential for cheating but others find ways to assign projects and individualize assignments. Another misconception is that only those who are very computer literate can best accomplish online education. While some knowledge and experience are necessary, a student or instructor need not be an expert. The technology is merely the vehicle by which distance learning is delivered. {Kearsley 1997 #80}{Bannon 1995 #130}

Technology, or the computer, is the medium that helps the student communicate and collaborate with one or many persons, synchronously or asynchronously. It is a support and resource for acquiring an education outside of the traditional classroom. (Bannon 1995) While research shows a slight learning advantage for newer media, in the end it is the content carried by the vehicle that results in learning. The curricula, interaction, and collaboration assist students in constructing knowledge. (Clark 1983)

Isolation is overcome and interactivity is enhanced through computer mediated communication (CMC) as students who live in diverse locations may exchange information, work on projects, and communicate asynchronously with few limitations of time and space. (Henri 1995) Since the virtual classroom is not bound by time or place, there is a potential for greater interaction as projects and student discussion may continue at any time. (Barreau 2000)

Interactivity is often cited as one of the most important elements of successful online education, but flexibility is also an aspect students frequently indicate as a reason for participating in learning by distance. Flexibility in interacting becomes crucial for many students due to varied schedules, allowing them to contact instructors and other students through e-mail anytime or from any location. The availability of bulletin boards, chat-rooms, and e-mail provide continuous interaction but in an asynchronous mode. (Morris 1999)

Adult students find a greater degree of flexibility in asynchronous learning as it more easily accommodates work schedules. Designated times for I-chat may conflict with the work schedule, therefore preventing some students from attending the session, or perhaps the course. (Carr 2000) Asynchronous learning also allows students time to reflect and think before responding to ideas, questions or comments made by others. This reflection time enables students who feel uncomfortable with speaking out in the traditional class an opportunity to participate. (Alexander 1999)

A study of five distance classes offered at Drexel showed that 36 percent of the interactions took place between 8 p.m. and midnight and 22 percent took place between 4 p.m. and 8 p.m. Feedback from the students indicated 85 percent felt they had more access to the instructor than in a conventional course, 80 percent would take another course asynchronously, and 95 percent felt that seeing the ideas and assignments of others was useful. ({Oblinger & Maruyama 1996 #50}) Distance education instructors asked to rank types of interaction felt asynchronous learning activities are most important but also indicated synchronous teacher-learner interaction is important to the learning process. (Soo and Bonk 1998)

Students and instructors acknowledge that asynchronous communication stimulates interactivity by providing an opportunity for round-the-clock contact time for reading and responding to e-mail, while synchronous learning requires real-time communication. Real-time also demands being in a given place at a given time. If student-centered learning is to take place the instructor must become a facilitator rather than the traditional lecturer and encourage the group dynamic of brainstorming. Synchronous communication provides opportunities for sharing ideas or experiences, making the process more like natural conversation that stimulates thought and ideas.

Participating in "group discussion" contributes to community building by bringing people together, not in physical locations, but based on ideas, concepts or theories. While some view synchronous communication as a potential for one-way activity, that would not be an ideal mode. The instructor becomes the facilitator who encourages all students to contribute to the group dialog. Done in a collegial and nurturing way, relationships can be developed that will last long past the class meetings and even lurkers may find the environment safe enough to speak from time to time. Even though asynchronous communication allows time for reflection it may generate a more formal response, whereas synchronous communication generates a more natural informality and less structured dialog. (Shotsberger 2000)

METHOD AND ANALYTICAL TECHNIQUES

Research on web-based distributed learning is in its infancy, and as is appropriate, even the most self-evident results are subject to questioning and controversy. Most of the research to date is limited in its generalizability because it is either too system specific, too course specific, or the population size is too small for statistical significance.

In addition to its role in meeting the national shortage of information technology workers and managers, the field of Information Studies was selected for this study because the ratio of institutions offering the master's degree at a distance to the total number of graduate degree-granting institutions is relatively high when compared to other fields. Over 35% of all ALA accredited schools in North America offer a master's degree with no residency requirement. An additional 11% require limited residency (3-15 credit hours). This is a field that has considerable experience with distance delivery. Several institutions have offered full professional master's degree programs at a distance for more than ten years. Therefore, the artifacts of recent change (such as change in pedagogical style) that have been criticized in the literature on media effects are less likely to be present in this field than in many others (Clark 1983).

The degree program at the FSU School of Information Studies was selected for Part I of this study because its web-based distributed learning program is relatively mature (4 years at the initiation of the study), offers a sufficient number and range of courses (20 courses in two majors), and enrolls a sufficiently large number of students (approximately 400 students participate in web-based courses during an academic year).

In Part I of this study, web-based course offerings at the FSU School of Information Studies are examined using content analysis to determine type and degree of interaction (See **Table 1** for a summary of the parts of the study). While all of the courses are delivered using a common interface, a wide variety of tools, technologies, and media are incorporated in configurations that vary from course to course depending on pedagogical needs. Some courses require frequent interaction, while others require only occasional interaction. Some courses emphasize synchronous interaction, while others emphasize asynchronous interaction. Table 2 outlines the content analysis scheme.

Part I of the study examines the synchronous and asynchronous interaction logs for twenty courses. Each course is placed on an interaction scale (vertical axis) from low to high interaction, based on the number and frequency of observable interactions (See **Figure 1**). Each course is also placed on a synchronicity scale (horizontal axis) from asynchronous to synchronous, with courses that employ an even mix of synchronous and asynchronous interactions located at the mid point. Based on this plot, cluster analysis is used to establish course interaction types. In-depth interviews with faculty teaching the courses and focus-group interviews with students enrolled in the courses will be conducted to further probe these designations, and in-depth interviews and observations will be conducted at two other universities to ensure that the interaction types are transferable to other contexts.

Three measures of success may be established for each course interaction type: retention, student satisfaction (survey to be developed), and learning outcomes (grades [at intervals 1 & 2] and employment in the field or acceptance to an advanced graduate degree program [at interval 3]). Data are collected at three intervals: (1) completion of the course; (2) completion of the degree program; (3) one year following completion of the degree program. A student/graduate perception measure is used to compare success according to course interaction type; univariable parametric technique may allow either t-test, ANOVA or regression techniques to be used.

In Part II, all other North American institutions offering web-based graduate degree programs in Information Studies will be asked to participate in a comparative survey. Each program will be provided with instructions for typing each web-based course offering for the past two years using the course types developed in Part I. For each course, these institutions will be asked to provide information regarding retention rate, and any data they may have collected regarding student satisfaction and learning outcomes. All institutions will be offered the opportunity to administer the student satisfaction survey developed in Part I at the three designated intervals. The data collected in this study will help to validate the data collected in Part I by extending:

1. The number and types of development and delivery modalities employed (addresses system specificity)
2. The number and range of content of courses examined (addresses course specificity)
3. The size, institutional diversity, and geographical diversity of the population (addresses size of population)

A pilot study of Part I of the research has been conducted using five FSU summer courses. As a result of the pilot project, a content analysis scheme has been developed for use in the research study to be conducted on Phase I and II of the study. This pilot study has provided initial data from which to develop the satisfaction survey instrument for the interview portions of the research. The five courses have been plotted and tentative indicators of course types have been developed. In-depth interviews were held with faculty teaching two of the courses, and focus interviews will be held with students enrolled in two of the courses by mid-April. The data collected from these interviews will be used to verify and extend the tentative indicators.

IMPORTANCE OF FINDINGS

This study will provide empirical findings that will assist in the design and development of web-based distributed learning courses and degree programs.

Higher education administrators will be able to use these results to support informed decision-making regarding:

- Evaluation of proposals for web-based delivery of degree programs, including understanding interaction indicators for success
- The resources required to support well-designed distance learning programs, particularly as relates to interaction and student success and satisfaction
- The selection of course development products to assist faculty in designing courses that have appropriate frequency, intensity and topicality of interaction
- The selection of course delivery products that provide appropriate and well-designed interaction tools
- The selection of infrastructural technologies, especially as relates to interaction support.

Faculty will be able to use these results to support informed decision-making regarding:

- Preparation of proposals for web-based delivery of degree programs, including understanding interaction indicators for success
- The resources required to support well-designed distance learning programs, particularly as relates to interaction and student success and satisfaction

- The design of courses that have appropriate frequency, intensity and topicality of interaction
- The selection of course delivery products that provide appropriate and well-designed interaction tools
- The selection of infrastructural technologies, especially as relates to interaction support.

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TABLE 1: STUDY DESIGN

<table>
<tr><th></th><th>Course Completion</th><th>Degree Completion</th><th>1-yr post Degree Completion</th></tr>
<tr><td>Part 1</td><td>• Analyze Logs
-content analysis
-Cluster analysis
• Faculty Interviews
• Student Focus Group Interviews
• Student Satisfaction Survey</td><td>• Retention Data
• Student Satisfaction Survey</td><td>• Learning Outcomes
• Student Satisfaction Survey</td></tr>
<tr><td rowspan="2">*Part 2</td><td>• Typing of courses
• Faculty Interviews
• Student Focus Groups
• Student Satisfaction Survey</td><td>• Retention Data
• Student Satisfaction Survey</td><td>• Learning Outcomes
• Student Satisfaction Survey</td></tr>
<tr><td colspan="3">• Correlation of data as related to retention rate, student satisfaction, and learning outcomes</td></tr>
<tr><td colspan="4"><i>*Funds are requested for expenses pertaining to Part 2 of the study</i></td></tr>
</table>

Interactivity Research: Phases and tasks for Parts 1 and 2

TABLE 2: CODES FOR CONTENT ANALYSIS PROJECT

Format

A = Asynchronous

S = Synchronous

Actors

In = instructor

St = student

Ta = teaching assistant

He = help-person (help-"name")

Gu = Guest participant

Mt = mentor assigned to the course

Interaction

B = asking a question, directive to start an interaction, or a redirection of interaction

R = responding to a previous statement, verbal or non-verbal

X = two types of interactions in a single statement; a transition.

Activity

P = activity process (anything to do with the mechanics of the course, administration, class management, etc.)

C = activity content (anything to do with the content of the course, i.e., asking about how to do an assignment, quiz, etc.)

Topic

T = topic (the subject of the discussion, i.e., what is being discussed in class that day or in a FO posting) as

indicated in the course Calendar.

Misc.

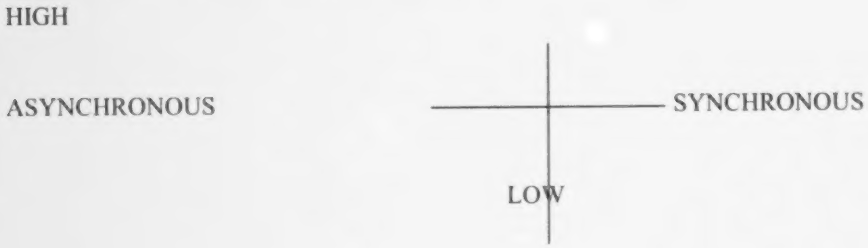
Nr = any non-relevant statements and actions; not related to content.

Nv = non-verbal

Order of the coding

Format-Actors-Interaction-Activity/Topic- (n)

FIGURE 1: INTERACTIVITY SCALE


HIGH
ASYNCHRONOUS
SYNCHRONOUS
LOW

67th IFLA Council and General Conference
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Division Number: **VII**
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Meeting Number: 193
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On the reform of Library and Information Science Education according to the changes of librarians' function under network environment

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Abstract:

Based on analysis of the direction of library cause's development and changes of Librarians' social function, the article puts forward some key measures in reform of Library and Information Science Education, such as practice in the education of Internet resource management the guidance of the idea about intellectual property right balance ,the information library education, etc.

Keywords Library and Information Science Education Network Environment

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1. Developing direction of library cause under network environment

With the improvement of information resource's position in economic growth， information resource management, especially in international information exchange， has become a new strategic commanding point of competition and cooperation. Internet， regarded as embryo of information highway， has led us into a network age. It changed the time and space pattern of information exchange essentially， and provided us with extremely abundant information resource. As a result， libraries， which traditionally dealt mainly with books and periodicals, have to reform through at information collection and processing and service， to construct a new type of service model attaching more importance to proving knowledge. Libraries should take the guiding principle of "coming public welfare with industrialization"， to reconstruct the new model of "multifunction， networking， multi-carrier and intelligent"， in order to quicken global networking and allocate information source correctly for education and research. It also develop information consulting business service for reform and decision. Complying with need of library cause, librarians should redefine their social responsibilities; library and information education organizations should adjust its reform thoughts too.

2. Librarians' social responsibilities under network environment

Facing more expanded and disordered information resource, librarians should put their specialty of information management to good use, and bring the function of intellectual information service into play. We can generalize their responsibilities in network age as blow:

(1) Internet Information navigation, providing source information

Under network environment, Internet has become a large library form which people obtain information, Librarians should correspondingly become the type of information navigation, who can lead users to enjoy a trip online and show Internet information for them. For the reason that Internet information are numerous, wide, diversified, dynamic, uneven in quality, and librarians are good at information collecting, processing, distribution, construction, researching and serving, they can bring this function of information navigation into play.

(2) Internet information organization, providing processed information

The working object of information organization is either information online or information in self-developed database. In the world, this kind of business done by librarians has gotten a great success, such as "clearing house Internet special resource guide" developed in America, "guide of Internet special information database" discussed and setting up in China. Besides this, information organization based on library collection source are more diversified. The forms are:
1) document base, such like frontpage of library; 2) database, such like *Chinese academic journals*, etc. 3) knowledge database like topic information journals, topic information base or topic consulting report, etc. , which are processed at deep layer.

(3) Internet information development, providing desired information

Desired information " is put forward by Belkin, expressing more concerns with users subjectivity and reflecting their cognition structure. Desired information is distinguished with what we called "needed information", because it must be gained by developing. Information development at present has a more special and profound form namely "information mining", which has become a special concept. It provides users with profound information, by comparing with concepts and their relevance, from information base consisting of non-isomorphic data. By this way we can do data mining and full-text mining, and reform the intention of traditional SDI(Selected Dissemination of Information), making great progress at width and depth of information than before. Only when more and more information developing means have been researched and provided, users' information need which are more personal and reflects their cognition structure, can be met well.

(4) Internet information consulting service

As important component of social information consulting industry, libraries should develop consulting business and improve service quality. These business include: set up records of consulting cases and classifying index of Internet resource; help to build information retrieval formula; help to construct users' own information logging in; set up frontpages; search database; train users online, etc. Compared with traditional information consultation, the business online has some outstanding features as: more usage of computers and information techniques to search and process information; more information exchange with users through Internet; consultants having more knowledge about broadcast, TV station, computer network, communication, etc; consultants being more skilled at using information techniques, than traditional consultants. Therefore, library consultants must train themselves of knowledge online and renew old knowledge, in order to undertake responsibilities for society.

Along with transform of librarians' responsibilities, their social image and orientation have changed. According to present materials, we can sum up three points of view. First, regarded in foreign, so called "infor-librarian" is such a librarian who can extract information resource from a large special digital library, then distinguish, choose, process, finally provide relevant index and electronic journals, technical reports, data files, and other visual materials for users. Secondly, by a German at 62th ILAS in Beijing, the librarian can be defined as "network professional", "information middleman", "system designer". Thirdly, by internal scholar, the librarian should become the network manager. Their working model is: set up library workstation from which they can collect, arrange, analysis and convey Internet resource timely, becoming "electronic navigator". Moreover, librarians are considered as "Electronic serving librarian" "CD_ROM librarian" "Internet librarian", etc. Obviously, this means not adding new positions, but reforming librarians to get used to new technical environment. To some extent, the change of librarians' social image and orientation determined direction of the reform library and information science education

3. Principles and measure of library and information science education reform

Conducted by social demand, the reform direction should be: conform to development of network, bring librarians' abilities at information and knowledge management into good play. The main goal of reform is to develop persons who are good at Internet resource collection, processing, protecting and consulting, etc. To realize it, many problems should be considered and solved, but the author will discussed mainly on some key measures of the reform.

(1) Put more weight on the practical teaching of Internet information

It means, in this kind of teaching, theory knowledge is necessary, but we should also develop practical ways, combining topic subjects.

The theoretical teaching should be taken according to the following: 1) guide students to understand main situation of Internet, such as: network construction, information resource distribution, features of multimedia information; 2) help students be familiar with network functions, such as E-mail, FTP, BBS, E-meeting, information search, etc. 3) students should master some necessary network techniques.

In practical teaching, our principle should ally with library's business departments, educating students with thought of "Problem solving", including as below: construct users to get correct searching roads of information; help to download relevant information and arrange into topic information base; organize to develop practical software; do at deeper layer information producing and announcing service. We can also attract students to join in some research or development tasks, so as to improve their abilities at information management.

(2) Take seriously the guidance and education of the idea of intellectual properly rights balance

Advance of information techniques has greatly changed the system and structure of intellectual property rights laws, and even extent their intention. The main reasons lie in two aspects. On one side, the revolutionary changes of information resource's creating, spreading and using originating from techniques must be adjusted by the intellectual property rights system; on another side, establishing and perfecting the system can also improve the development and reform of social information resource management's mechanism, at both lays and links. Therefore, we can learn and master essentially the balance of intellectual rights protection and encouragement. it's useful to strengthen social consciousness of valuing intellectual property rights and developing or using information properly; it's also useful to understand for students many problems about intellectual; properties protection, especially in specific stage of IRM and for specific information subject.

For instance, for information producer, the system of intellectual property rights can protect their rights and interests, encourage their activities to research, develop, produce and spread the productions of science technique, art, literature and industrial; for system of social information resource, with more and more people's creating activities and information resource, the management of information have more abundant working source; for managers of information, it's reasonable that their work is a kind of intellectual one and their rights and interests should be met by intellectual property right laws, so their social status will be higher; for information spreader, the system of intellectual property right can standardize their actions of reproducing documents, duplicating, reporting, setting up bookstore online or other authors' works base, spreading and exchanging others' information productions with intellectual property right by BBS or E-mail, etc. Intellectual property right system is the best way to adjust and administer the electronic or virtual environment; for information traders, the system can restrain their blind、free or illegal market activities; for information users, since it's easy to break rules by information techniques, the system can also be the balance of the contradictories.

(3) Strengthen education of information literacy for the students in LIS specialty

Information literacy can be understood in broad sense as: the qualities about information including information intelligence, information morality, information awareness, information conception possessed by information society members. For everybody, the process of recognizing and reforming the world is also the process of information inputting, processing and outputting. In this course, they should have the aid of producing tools and bring their subjective enthusiasm into function in order to influence the world profoundly. Advance of information techniques and information system extended social members' information organs, and provide them with high effective tools. Otherwise, in reality, information literacy is different between different subjects. Beside the difference of their knowledge structure, the most important reason is that, the applying pattern and extent of information techniques system are closely related to people's information literacy. Only when librarians possess excellent information literacy, their social responsibilities will be brought into good play. For this reason, first of all, student in our principle must be strengthened at their information literacy, then to improve those of the whole society.

(4) Reform and design course system of library and information science education

Changes of librarians' responsibilities under network environment demand to reform the goal of library and information science education. Since that librarians undertake functions of not only information navigation and processing, but also developing and consulting service at deep layer, which request them to go deep into content of special knowledge, mining or processing, in order to provide specialized and designated information products. To realize these functions, librarians should be provided with wide knowledge, all-round knowledge structure, as well as profound special knowledge. But this article will not discuss on particular course system or module, but some trains of thought in education reform. According to responsibilities of librarians under network environment, we should set up the general curricula, the specialty courses, the specialty foundation courses, interrelated specialty courses and particular specialty courses; pay more attention to allying our subject with other subject; encourage sharing and coordinating of education force between different subjects and different colleges; making our principle become a really very open principle, so as to develop a large mount of talent persons of information resource management.

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Joint Meeting with: University Libraries and other General Research Libraries Workshop
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Materiales en castellano sobre alfabetización en información: primeros resultados de un proyecto del Comité Permanente de Bibliotecas Universitarias y otras Bibliotecas Generales de Investigación de la IFLA

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1. – Antecedentes del proyecto

Durante el taller nº 158A de la Sección de Bibliotecas Universitarias y otras Bibliotecas Generales de Investigación de la IFLA sobre "Crossroads of flexible learning: the library in a changing university environment..." celebrado en Amsterdam el 20 de agosto de 1998, la profesora Paulette Bernhard, de la Universidad de Montreal, hizo la presentación de su sitio web dedicado a la alfabetización en información http://tornade.ere.umontreal.ca/~bernh/AAFD.97/AAFD.index. Posteriormente, en la reunión del Comité Permanente (CP), el Presidente de la Sección, Alex Byrne, se comprometió a estudiar con la profesora Bernhard la posibilidad de hacer algo parecido con un enfoque específico para las bibliotecas universitarias y de investigación. Como miembro del CP de la Sección, adquirí el compromiso de localizar materiales relevantes en castellano para incluirlos en el proyecto

En Bangkok, durante la reunión del día 27 de agosto de 1999 del CP de la Sección, tuve la oportunidad de informar brevemente sobre las actividades realizadas en cumplimiento de dicho compromiso:

1°) Se distribuyó un mensaje a través de las listas profesionales IWETEL y FIDEL dando cuenta del sitio web y solicitando información importante sobre materiales en castellano a incluir; siendo las respuestas escasas y con resultados poco relevantes.

2°) Se accedió a sitios web de bibliotecas universitarias de España, Portugal y Latinoamérica en busca de sus planteamientos al respecto, fundamentalmente a través de sus programas de formación de usuarios, instrucción bibliográfica, etc. Se obtuvo la impresión de que había muchos documentos en castellano sobre habilidades para el uso de la red y de las computadoras, sobre los servicios ofrecidos por las bibliotecas, o sobre cómo redactar trabajos de investigación, etc. pero sin ningún planteamiento integral de las habilidades para el acceso y uso de la información o alfabetización en información; y mucho menos integradas en las políticas institucionales de formación en habilidades básicas de cara a la inserción en el mundo laboral y a la formación permanente de los titulados. Respecto a la formación de usuarios, en general las páginas web solían incluirla dentro de los servicios que presta la biblioteca y sólo se daba información sobre las actividades programadas y la fórmula para asistir a ellas, pero sin incluir materiales desarrollados para consulta directa en la red. Se encontraron algunas excepciones dentro de este panorama en México (por ej., Universidad de Tolima, o Universidad Autónoma de Ciudad Juárez) o en España (por ej., Universidad Politécnica de Cataluña).

3°) A la vista de los resultados, tras consulta con el Presidente de la Sección, se procedió a iniciar la traducción de una serie de documentos sobre alfabetización en información considerados como hitos en la historia del concepto y de su aplicación práctica. En Agosto de 1999 ya se encontraban traducidos al castellano y a la espera de las correspondientes decisiones del CP de la Sección los siguientes documentos: ACRL/BIS, *Model statement of objectives for academic library instruction* (1987); ALA Presidential Committee on Information Literacy, *Final report* (1989), seguido del *Progress report* (1998); Paulette Bernhard, "Apprendre à 'maitriser' l'information: des habiletés indispensables dans une 'société du savoir'", en *Education et francophonie* (1998); Bonnie Gratch Lindauer, "Defining and measuring the library's impact on campuswide outcomes", en *College & Research Libraries* (1998); y el *Information Literacy Institutional Quotient Test* de Cerisse Oberman y Betsy Wilson (1998).

2. – **Proyecto 2000-2001**

Visto que las gestiones del Presidente del CP no habían resultado particularmente fructíferas en relación con la página web, y para darle continuidad al trabajo ya desarrollado sobre materiales de alfabetización en información, en la citada reunión del CP en Bangkok se decidió trasladar al Comité de Coordinación (CC) de la División I la solicitud de apoyo de la División para un nuevo proyecto sobre materiales de alfabetización en información en castellano, bajo la responsabilidad conjunta de Jesús Lau, como miembro del CP y como Presidente de la Mesa Redonda sobre Formación de Usuarios de la IFLA, y mía como miembro del CP y encargado de las primeras actividades. Esta petición de apoyo fue tomada en consideración por el CC de la División I en su reunión del 27 de agosto, y su Presidente, Winston Tabb, se ofreció a presentar la propuesta y la consiguiente petición de financiación al Comité Profesional de la IFLA. Finalmente, el Comité Profesional de la IFLA aprobó el proyecto y su financiación en su sesión de diciembre de 1999[1], debiendo desarrollarse el mismo a lo largo del bienio 2000-2001, con una primera presentación de resultados en Boston 2001, cosa que se lleva a cabo por medio del taller celebrado en Simmons College.

2.1. - *Objetivos*

Los objetivos del proyecto, y las tareas asociadas a cada objetivo, son los siguientes:

A) Búsqueda de criterios de calidad, tanto en contenidos como en diseño, para la presentación en red de materiales de alfabetización en información y de posibles modelos ya disponibles en la red.

B) Confirmación, o no, de la escasez de materiales en castellano, mediante una búsqueda más sistemática y completa en los sitios web de varias universidades españolas y latinoamericanas.

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[1] *IFLA Journal*, 26, 1 (2000), 65. Disponible en: http://www.ifla.org/iflaj/news26-01.pdf. (NB: todas las referencias electrónicas comprobadas el 12-06-01).

C) Selección y traducción de una serie de documentos importantes en el desarrollo y aplicación práctica del concepto de alfabetización en información, además de los ya traducidos en la primera fase, para su publicación en IFLANET o en otro sitio a decidir por el CP de la Sección, como evidencia de buena práctica.

D) Posibilidad de desarrollar un modelo de programa básico de alfabetización en información, integrado en el contexto más amplio de las habilidades básicas, adaptable a las condiciones locales de cada biblioteca universitaria de los países hispanohablantes.

2.2. - *Desarrollo y resultados de las tareas programadas*

2.2.1. Criterios y modelos de calidad en la red

En este apartado, las tareas para el proyecto se han visto especialmente facilitadas a lo largo del bienio 2000-01 por el hecho de que en estos años han terminado por cristalizar en todo el mundo las tendencias a convertir el tema de la alfabetización en información en un punto central de la agenda de las asociaciones profesionales y del entorno educativo, particularmente del universitario. La mera atención al desarrollo de los acontecimientos tanto en el ámbito profesional y académico como en el de la red ha permitido ir descubriendo la aparición de modelos teórico-prácticos, tanto para los contenidos y su integración en el planteamiento más amplio de las habilidades básicas, como en el del diseño. He aquí los desarrollos más significativos:

A. – La alfabetización en información debe ser parte consustancial de las políticas institucionales de formación de los estudiantes en habilidades básicas para la vida, el empleo y la formación permanente. Ejemplos: "Ability Based Currículum" (ABC) o plan de estudios basado en habilidades[2] ; "Problem Based Learning" (PBL) o aprendizaje basado en solución de problemas[3]; o el debate y las experiencias de formación en habilidades básicas en la Educación Superior[4], como consecuencia de la reflexión mundial sobre la formación permanente y el aprendizaje a lo largo de toda la vida y de los roles de la Educación Superior al respecto[5].

B.- Se completa el tránsito desde la tradicional formación de usuarios (instrucción bibliográfica o introducción al uso de la biblioteca y de sus recursos) a la alfabetización en información (formación de las habilidades para el acceso y uso de la información) como objetivo global evaluable de la formación de los titulados; por ello, se describen cada vez más experiencias de integración de la alfabetización en información en el *curriculum*, o bien como asignatura específica del plan de estudios, o bien como contenidos y niveles integrados en el desarrollo del programa de asignaturas clave, o incluso como actividad extracurricular de autoformación, recayendo la responsabilidad del logro de los objetivos globales en toda la institución, es decir, en profesores, bibliotecarios, informáticos, expertos en recursos educativos, etc., que deben cooperar estrechamente a tal fin. Aquí el liderato corresponde a la ALA, con sus diferentes iniciativas sobre alfabetización en información, y a las bibliotecas universitarias norteamericanas y canadienses, con sus asignaturas y sus materiales en red sobre alfabetización en información[6], aunque los desarrollos más recientes tanto en Australia, el Reino Unido o Suecia, donde ya comienzan a celebrarse series de conferencias internacionales sobre alfabetización en información[7], como en Francia[8] permiten asegurar que el concepto, los contenidos y los retos de la alfabetización en información son ya el comienzo de una nueva era en la historia de las bibliotecas universitarias.

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[2] Véase http://www.alverno.edu/educators/e_curriculum.shtml.

[3] T. Oker-Blom. "Integración de las destrezas en acceso y uso de la información en los planes de estudio basados en problemas". Disponible en http://www.ifla.org/IV/ifla64/142-112s.htm.

[4] Véase en http://www.shu.ac.uk/keytokey un excelente punto de partida para una mayor profundización en los aspectos teóricos y prácticos del debate sobre las habilidades básicas transferibles en la educación superior.

[5] Véanse como ejemplos el informe de Peter Brophy *et al.*, The development of UK academic library services in the context of lifelong learning, April 1998, disponible en http://www.ukoln.ac.uk/services/elib/papers/tavistock/ukals/ukals.htm l; o los materiales de la Conferencia mundial de la UNESCO sobre la educación superior (1998), disponibles en http://www.unesco.org/education/educprog/wche/index.html.

[6] Un buen punto de acceso a los programas más importantes pueden ser los sitios siguientes: http://www.infolit.org; http://www.ala.org/acrl/infolit.html; o http://www.ala.org/acrl/nili/nilihp.html, aunque cualquier consulta de los

C. – La importancia de las habilidades básicas y de la alfabetización en información como resultado global de la titulación obliga a replantearse los contenidos a impartir, las destrezas a formar y los niveles a alcanzar en diferentes estadios de la carrera universitaria y, por tanto, también el tipo de materiales a ofrecer a través de la red. La búsqueda de modelos y criterios de calidad en relación con los contenidos de los materiales de alfabetización en información nos lleva, primero, a los diferentes modelos teóricos generales o específicos descritos en la literatura (por ejemplo: AASL/AECT; Bernhard; Benito-Morales; Bruce; "Seven Pillars Model")[9]. Después, a las Normas desarrolladas recientemente por diversas asociaciones profesionales, sobre todo la ALA/ACRL (USA) y el CAUL (Australia), o los nuevos Objetivos de la ACRL-IS[10]. Y, por último, a los ejemplos prácticos disponibles tanto en texto impreso (Iannuzzi)[11] como en línea (Asignaturas de alfabetización en información de distintas universidades norteamericanas, canadienses o australianas, por poner un ejemplo, y tutoriales de bibliotecas universitarias sobre alfabetización en información accesibles en red)[12]. En cualquier caso, la aparición de las Normas y de los Objetivos de la ACRL y la adopción de los modelos más complejos en el ámbito universitario hacen prever que habrá una nueva generación de tutoriales de alfabetización en información muy diferentes a los que en este momento pueden considerarse como modelos, lo cual relativiza de algún modo la importancia que se le pueda dar a la búsqueda de modelos actuales para los resultados del proyecto.

D. – En cuanto a la calidad del diseño, las tareas del proyecto se han beneficiado no sólo del auge e importancia de los estudios de usabilidad y de accesibilidad[13] en general, sino más específicamente de los

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términos "information literacy" por medio de un buscador arrojará una gran cantidad de resultados que pueden ser utilizados como punto de partida para encontrar los planteamientos propios de cada institución o universidad.

[7] Véanse como ejemplos las siguientes: http://www.bibl.mah.se/konferens/ck2; http://www.iteu.gla.ac.uk/IT&InfoLit2002/Net/index.html.

[8] Una buena puesta al día del estado de la cuestión en Francia se encuentra en Riondet, Odile (dir.). *Former les utilisateurs de la bibliothèque*. Villeurbanne : ENSSIB, 2000.

[9]) Se puede encontrar una descripción casi exhaustiva de los diferentes modelos de alfabetización en información en Benito-Morales, Félix. "Nuevas necesidades, nuevas habilidades. Fundamentos de la alfabetización en información". En Gómez-Hernández, José Antonio. *Estrategias y modelos para enseñar a usar la información : guía para docentes, bibliotecarios y archiveros*. Murcia : KR, 2000, pp. 45-72. Para las bibliotecas universitarias son particularmente útiles los de Christine Bruce. *The seven faces of information literacy*. Adelaide : Auslib Press, 1997; y el de SCONUL ("Seven Pillars Model"), 1999, éste ultimo disponible en inglés en http://www.ifla.org/IV/ifla67/papers/016-126e.pdf y en castellano en http://www.aab.es/51n62a4.pdf.

[10] ALA/ACRL *Information literacy competency standards for higher education*, 2000, disponible en http://www.ala.org/acrl/ilcomstan.html. Versión al castellano disponible en http://www.aab.es/51n60a6.pdf. ALA/ACRL-IS *Objectives for information literacy instruction: a model statement for academic librarians*, 2001, disponible en http://www.ala.org/acrl/guides/objinfolit.html. Versión al castellano pendiente de publicación por la Asociación Andaluza de Bibliotecarios. CAUL *Information literacy standards*, 1st. ed., 2001, disponible en http://www.caul.edu.au/caul-doc/InfoLitStandards2001.doc. Versión al castellano pendiente de publicación por la Asociación Andaluza de Bibliotecarios.

[11] Iannuzzi, Patricia, *et al. Teaching information literacy skills*. Boston : Allyn and Bacon, 1999.

[12]) Puede verse una buena selección en Gómez-Hernández, José Antonio. "La alfabetización informacional y la biblioteca universitaria. Organización de programas para enseñar el uso de la información". En Gómez-Hernández, José Antonio (coord..). *Estrategias y modelos...*, sobre todo pp. 212-219 y 235-241. Se puede encontrar una versión algo diferente de este texto en http://158.143.67.65/congreso/ponencias/ponencia-50.pdf. Finalmente, una página web con una buena selección de enlaces en varios idiomas y países para todos los temas objeto de este proyecto se encuentra en http://www.um.es/gtiweb/jgomez/hei.htm.

[13] Véase http://www.useit.com, y la versión en línea de la obra de Virginia T. Mates en http://www.ala.org/editions/openstacks/insidethecovers/mates/mates_toc.html.

resultados prácticos del proyecto de la IFLA sobre evaluación de programas de formación de usuarios en red[14], de las tendencias resaltadas por los premios anuales a la innovación en la formación otorgados por la ALA[15], o incluso, por los "trucos" para el desarrollo eficaz de programas de formación en la red (del ACRL-IS Teaching Methods Committee) y por los criterios de evaluación de tutoriales en red (de la Library Instruction Round Table (LIRT) de la ALA) cuya traducción ofrecemos como apéndices.

2.2.2. Estudio de sitios web y otros materiales en castellano

En lo que a España se refiere, en los últimos tiempos se han producido una serie de acontecimientos que nos permiten afirmar que las impresiones negativas obtenidas a lo largo de la primera fase previa del proyecto comienzan a cambiar de signo, a pesar de que en estudios recientes sobre la formación de usuarios en las páginas web de bibliotecas universitarias se sigue detectando todavía la ausencia de planteamientos integrados de la alfabetización en información[16]. En varios de esos acontecimientos se han producido aportaciones que ya entran de lleno en la discusión del nuevo marco y de los nuevos retos de la alfabetización en información[17]. Por otra parte, en revistas profesionales como *Educación y Biblioteca*, *Anales de Documentación* y *Boletín de la Asociación Andaluza de Bibliotecarios*, por poner algunos ejemplos recientes, han ido apareciendo textos traducidos de autores de relieve internacional o documentos clave como las Normas de la ALA/ACRL o la posición de SCONUL. Además, ha aparecido a finales del año 2000 una monografía en castellano donde se hace un planteamiento global de la alfabetización en información (fundamentalmente para todos los niveles educativos, pero también para archivos y bibliotecas públicas), se dan las claves del estado de la cuestión en el ámbito internacional y se presentan tanto los diferentes modelos de alfabetización en información existentes como las aplicaciones prácticas en diferentes páginas web de bibliotecas universitarias españolas y extranjeras, además de ofrecer referencias abundantes y actualizadas, tanto impresas como electrónicas; todo lo cual la convierte en un punto de partida indispensable para los profesionales hispanohablantes de la educación y de las bibliotecas[18]. También en este punto las previsiones del proyecto se han visto alteradas por la aparición de las Normas y Objetivos y por los modelos, convirtiéndose en prioritaria la traducción y publicación en castellano de unos documentos cuya incidencia en el tipo de actividades de formación de usuarios va a resultar incontestable de forma inmediata.

2.2.3. Nuevas traducciones de textos básicos

Por esa última razón es por lo que, para este apartado de tareas, se ha negociado la traducción y publicación inmediata de aquellos documentos que han venido a fijar el marco en el que se van a desarrollar las actividades de alfabetización en información en las bibliotecas universitarias a partir de ahora, a saber: *Information literacy competency standards for higher education* (ALA/ACRL 2000); *Information skills in higher education: a SCONUL position paper* (1999); *Objectives for information literacy instruction: a model statement for academic librarians* (ALA/ACRL-IS 2001); *Information literacy standards*, 1st. ed. (CAUL, 2001). Estos documentos, que en algún caso ya han sido publicados en versión impresa en el *Boletin de la Asociación Andaluza de Bibliotecarios* y accesibles en red, estarán también disponibles en IFLANET, como parte de los resultados del proyecto. Por último, se está en negociaciones con Christine Bruce para incluir alguno de sus textos como introducción para el público hispanohablante de sus planteamientos sobre las "siete caras" de la alfabetización en información. En todo caso, estamos convencidos de que la disponibilidad en castellano de todos estos documentos va a constituir un elemento importantísimo a la hora de dar un empuje definitivo a la reflexión de los profesionales de nuestro entorno sobre los nuevos planteamientos de la formación de usuarios en nuestras bibliotecas universitarias.

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[14] Tobin, Tess and Martín Kesselman. Evaluation of web-based library instruction programs. 1999. Disponible en http:/www.ifla.org/IV/ifla65/papers/102-163e.htm.

[15] ALA Instruction Section Innovation in Instruction Award 2000: TILT (http://tilt.lib.utsystem.edu); 1999: RIO (http://www.library.arizona.edu/RIO).

[16] Alvarez-Alvarez, María Antonia. "La formación de usuarios en las páginas web de las bibliotecas universitarias españolas: estado de la cuestión". En XI Jornadas Bibliotecarias de Andalucía (Sevilla: 2000), pp. 345-355.

[17] Véanse como ejemplos las ponencias y comunicaciones del Seminario REBIUN sobre "La biblioteca al servicio de la docencia y la investigación" (Barcelona: 2000) disponibles en http://biblio.uoc.es/cas/rebiun/jornada.htm.

[18] Gómez-Hernández, José Antonio. *Estrategias y modelos para enseñar a usar la información : guía para docentes, bibliotecarios y archiveros.* Murcia : KR, 2000.

3. – Resultados del proyecto: modelo de tutorial en red

Dada la evolución del panorama sobre la alfabetización en información delineado más arriba, parecía evidente que el esfuerzo mayor y más rentable en principio dentro del proyecto había de ser la elaboración de un guión como modelo de tutorial que tenga ya en cuenta los modelos de alfabetización en información y las normas y objetivos publicados a lo largo de los últimos años y que, tras su discusión y reelaboración durante el taller de Boston, pueda ser convertido en un programa básico adaptable a las circunstancias concretas de cada biblioteca y, a ser posible, puesto a disposición en IFLANET para su descarga gratuita. Para la elaboración del guión de ese modelo de tutorial será conveniente resumir primero lo que en este momento parece estar ya consolidado como buena práctica en los tutoriales en red, y plantearse después una serie de cuestiones cuya respuesta deberá incidir necesariamente en el resultado final del guión y del tutorial.

3.1.– *Características generales de un buen tutorial y del proceso de elaboración.*

De acuerdo con Tobin y Kesselman[19], un tutorial en red es ante todo un instrumento interactivo de aprendizaje que permite una formación autodirigida y adaptada a los ritmos de asimilación del estudiante. No debe consistir en una simple acumulación de páginas y de enlaces a otras páginas. La inclusión de cuestionarios y tests en determinados pasajes del tutorial ayuda a evaluar la eficacia e idoneidad del instrumento, así como los progresos del usuario. En cuanto al contenido, pueden ir desde la simple orientación en el uso de la biblioteca y sus servicios, hasta el manejo de las bases de datos y las técnicas de investigación y redacción de trabajos, citas, evaluación de recursos, etc. De todas formas, el contenido y los enlaces deben ser apropiados para el nivel de la audiencia a la que se destina el tutorial, lo cual obliga a declarar abiertamente los objetivos y las metas de cada unidad o módulo de formación.

Donaldson[20], por su parte, al describir la elaboración de un tutorial para alumnos de primer curso de una Escuela de Gestión de Empresas, establece los pasos lógicos a seguir: a) establecer objetivos específicos; b) identificar instrumentos y métodos para conseguirlos (ejemplos: incorporar contenidos específicos de una disciplina; usar el aprendizaje interactivo; estructura modular o por secciones); c) decidir sobre cuestiones de estilo y diseño (ejemplos: formato en doble ventana (instrucción-demostración); menús de navegación; uso consistente y parco de colores; uso muy limitado de gráficos e imágenes); d) redacción del guión (ejemplo: 5 módulos -- Orientación sobre el tutorial; Fuentes de información; Revistas; Estrategias de investigación; Búsqueda en bases de datos); e) ejecución y aplicación del tutorial en relación con una asignatura específica, incluyendo examen y calificación; f) evaluación de resultados.

3.2.– Algunas cuestiones previas a la elaboración del tutorial

Si la alfabetización en información debe estar integrada en el plan de estudios, ¿quién se responsabiliza de ello y cómo se lleva a cabo?. ¿Como una asignatura más del plan de estudios que el alumno debe superar?. Si es así, ¿se tratará de asignatura obligatoria, optativa, o de libre configuración?. ¿Y en qué momento de la carrera convendrá ubicarla – primer año, final del primer ciclo, etc.?. ¿Quién la impartirá – profesores de biblioteconomía, bibliotecarios y profesores conjuntamente, etc.?. ¿Cómo se sincronizarán y coordinarán los ritmos de aprendizaje y los contenidos de la asignatura con otras actividades de otros servicios (informática, biblioteca) o incluso de otras asignaturas que también tengan un componente esencial de alfabetización en información?. ¿Qué contenidos teóricos y prácticos tendrá la asignatura dependiendo del curso o ciclo en el que se decida ubicarla?. ¿Cómo se evaluarán los resultados globales, los niveles alcanzados al final de la carrera, y qué tipos de acción compensatoria se establecerán en el caso de que los resultados sean muy dispares?.

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[19] Tobin, Tess and Martin Kesselman. Evaluation of web-based… 1999.

[20] Donaldson, Kelly A. "Library research success: designing an online tutorial to teach information literacy sills to first-year students". *The Internet and higher education*, 2, 4 (2000), 237-251.

Como es obvio, para todas estas preguntas hay muy variados tipos de respuesta en la literatura profesional que describe las fórmulas con que muchas universidades se han planteado la solución a estas preguntas. Cada solución tiene sus ventajas e inconvenientes, y la eficacia de las fórmulas empleadas tiene que ver con multitud de variables locales y de idiosincrasias institucionales que hacen imposible la homogeneidad de los planteamientos. Ahora bien, sea cual sea la solución que se adopte, lo que sí parece desprenderse del estado actual de la cuestión serían los siguientes principios:

a) La alfabetización en información debe ser un resultado global de la titulación, porque es un componente esencial de la formación que la universidad ofrece a sus titulados de cara a la inserción en la vida y en el trabajo.

b) Los responsables, por tanto, del logro de ese resultado global deben ser todos los miembros de la institución implicados en la formación, cada uno a su nivel; de ahí la necesidad de estrecha colaboración entre el profesorado, los bibliotecarios, los informáticos y los expertos en recursos y tecnologías educativas.

c) La planificación de los contenidos y el seguimiento de su aplicación a lo largo de toda la carrera debe ser responsabilidad de quien legalmente tenga esa atribución para cada titulación, incluida la valoración final y eventual certificación ante terceras partes (empresarios, administraciones públicas, etc.) de los niveles alcanzados por los titulados.

d) La elección de fórmulas de provisión de formación en alfabetización en información es clave, pero no tanto si se tiene clara la planificación global y se lleva a cabo lo planificado; en principio, por ejemplo, no debería ser incompatible, sino más bien complementario, el colocar una asignatura obligatoria u opcional en el tramo medio de la carrera, si determinados objetivos básicos de habilidades o de alfabetización en información se han ido consiguiendo gracias a actividades compensatorias, al reconocimiento de créditos de libre configuración para actividades organizadas por la biblioteca dentro de su programa de formación de usuarios, o gracias a una buena planificación de contenidos y prácticas en determinadas asignaturas clave del primer o segundo año, con estrecha colaboración entre el profesor y la biblioteca. Una vez más lo importante es el plan global y el resultado al final de la carrera

e) El esfuerzo de planificación se hace dentro de una carrera concreta, por tanto los contenidos se basan y se adecuan a las necesidades y planteamientos propios de las disciplinas específicas de esa carrera; el objetivo global consiste en que los titulados hayan aprendido a mantenerse al día en sus respectivas especialidades y a contribuir a sus propias disciplinas como profesionales en ejercicio.

f) Los tutoriales en red, como complemento de cualquiera de las soluciones que se adopten en cada institución, tienen que ser interactivos y ajustarse al nivel concreto de los usuarios a los que van dirigidos, y según la planificación de contenidos y de niveles que se haya hecho con carácter global para la titulación. Pero hoy por hoy, comienza a estar claro que las prioridades deben centrarse cada vez más en los alumnos de los primeros cursos, no sólo porque la experiencia del primer curso es determinante de muchas de las actitudes del alumno para los años posteriores, sino también por el interés que debe tener la institución en conseguir que los alumnos comiencen a sacar lo antes posible provecho de los recursos (bibliotecas, redes, informática, etc.) puestos a su disposición; y ello por razones de rentabilidad social, pero también de imagen y de éxito institucional (tasa de abandonos tras los primeros años, índice de fracaso académico, etc.).

3.3.– *Propuesta de guión de tutorial a desarrollar para el proyecto de la IFLA*

De acuerdo con todo lo anterior, para el Taller conjunto de la Sección de Bibliotecas Universitarias y de la Mesa Redonda de Formación de Usuarios a celebrar en Simmons College, Boston, en Agosto de 2001, se presentará y discutirá una primera propuesta de guión de tutorial con las siguientes características:

- Nivel: Alumnos de primer curso (Principiante avanzado SCONUL)

- Especialidad temática: Psicología

- Vinculación a una asignatura: Historia de la Psicología (asignatura troncal que deben cursar todos los alumnos en primer curso)

- Objetivos: Introducción básica al uso de la biblioteca y de los recursos de información disponibles a través de ella y a través de la red de la Universidad

- Contenidos: Introducción a la biblioteca. Introducción a los servicios en red de la universidad (uso de correo electrónico como comunicación con profesores, biblioteca, etc.). Recuperación de documentos en libre acceso y a través del catálogo en línea. Monografías y publicaciones periódicas. Internet como instrumento de referencia y ayuda general. Claves para elaboración de una bibliografía básica sobre un tema propuesto por el profesor de acuerdo con criterios APA. Claves para la presentación escrita de resultados. (Predominio de localización y organización SCONUL; Normas 2 y 4 de ACRL, pero en un estadio muy inicial)

- Evaluación de resultados: por el profesor y por el bibliotecario a través de los trabajos presentados

4. – Fase final del proyecto

Tras la valoración del borrador de guión en Boston, a lo largo de la segunda mitad de 2001 se procederá a una adaptación para ámbitos geográficos y temáticos diferentes, y tras la elaboración de algún otro guión con contenidos temáticos y niveles de competencia más complejos, se procederá a la elaboración y prueba de los tutoriales desarrollados, antes de su validación definitiva y puesta a disposición del entorno profesional hispanohablante por los mecanismos que el CP de la Sección de Bibliotecas Universitarias y la Mesa Redonda sobre Formación de Usuarios de la IFLA determinen, junto con los materiales traducidos dentro del proyecto.

ANEXO I:

Claves para desarrollar en red programas eficaces de formación de usuarios

ALA/ACRL Instruction Section Teaching Methods Committee

Los tutoriales en red deben ajustarse a los principios generales sobre buen diseño de páginas web descritos en otras fuentes (1). Además de tales principios, sugerimos las siguientes claves sobre aspectos pedagógicos de los tutoriales en red:

1.- **Delinear los objetivos y los resultados** con claridad para poder establecer una finalidad y unas expectativas realistas.

2.- **Ofrecer una estructura definida claramente** que

a) refleje los objetivos del tutorial, y

b) permita el aprendizaje lineal y no lineal, de forma que los estudiantes puedan revisar las secciones y / o seleccionar las rutas que más les convengan según sus necesidades.

3.- **Incluir ejercicios interactivos** (aprendizaje activo) tales como simulaciones, manipulación de objetos, crucigramas interactivos, o la aplicación directa de los principios. Estos ejercicios a los estudiantes a resolver los problemas permitiéndoles

a) practicar / responder a lo que se está enseñando

b) autoevaluar su propio aprendizaje

c) enfrascarse en un "aprendizaje en profundidad" (comprendiendo el significado) antes que en un "aprendizaje superficial" (memorizar y regurgitar lo memorizado)

d) recibir retroalimentación.

4.- **Prestar atención a los conceptos** que subyacen a la mecánica, de manera que las habilidades para la información sean aplicables a otras interfases de búsqueda.

5.- **Incorporar temas y lenguaje contemporáneos, siendo todo lo breve que sea posible y sin miedo a ser entretenido**. Todo ello redundará en

a) relevancia para la vida de los estudiantes

b) no inundarlos de verborrea

c) ayudarles a mantener el interés.

6.- **Ofrecer siempre una forma de contacto con el personal de la biblioteca.**

7.- **Cuando se use el tutorial, tratar de hacerlo en la mayor relación posible con una asignatura**, animando al profesorado a enlazar la instrucción en red con un trabajo de clase. Ello servirá para ofrecer experiencia adicional de primera mano en el uso de los recursos de información y en varios formatos dentro del contexto de un trabajo de clase concreto, reforzándose así la relevancia y las enseñanzas del propio tutorial.

Nota (1) Véase, por ejemplo, Lynch, Patrick J. Y Sarah Horton. *Yale Style Manual*. 15 Feb. 2000. En htttp://info.med.yale.edu/caim/manual; y Nielsen, Jakob. *The Alertbox: current issues in web usability*. 20 Feb. 2000. En http://www.useit.com/alertbox.

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(Traducción: Cristóbal Pasadas Ureña)

(Accesible en línea en http://www.lib.vt.edu/istm/WebTutorialsTips.html)

ANEXO II:

Tutoriales para formación de usuarios: criterios de evaluación

ALA-Library Instruction Round Table

Acceso

* El sitio debe ser útil con navegador ASCII del tipo lynx

* Preparado en HTML (para texto, cuadros y ventanas) y en GIF (para gráficos)

* La descarga de las partes no debe tardar mucho

* Generalmente es posible acceder al sitio

* El URL del sitio es estable; si cambia, hay una conexión inmediata al nuevo URL

* Se abre gratis; si no, las condiciones de acceso están bien visibles de forma inmediata

Diseño

* El uso debe ser intuitivo

* Las páginas grandes y complejas, sobre todo las que ocupan más de 10 pantallas, deben estar divididas en varios ficheros más pequeños

* No se deben usar las imágenes como mera decoración; deben ayudar a transmitir información

* Evitar utilizar marcado específico de cliente de forma que pueda ser utilizada por los principales grupos de usuarios

* Cada página debe tener un título corto informativo y descriptivo

* Los documentos divididos en muchas páginas deben incluir el título del documento y la fecha de publicación en la parte superior de cada página

* Las páginas deben tener pies estandarizados, incluyendo

- fecha de la última actualización

- dirección de correo electrónico o enlace a un formulario de correo electrónico que pueda ser utilizado para ponerse en contacto con la persona responsable en relación con el contenido de una página

- enlace a la correspondiente página matriz

* Las páginas individuales dentro de un sitio son concisas

* Aparecen instrucciones básicas antes de los enlaces y de las porciones interactivas

* Si las interacciones implican información privada, tienen que ser seguras

* Los documentos deben ser diseñados para minimizar la dependencia de los usuarios respecto de las ayudas para la navegación (por ej., teclas de retroceso y avance, listados de historial)

Contenido

* Relacionado con la función y la misión de la institución
* Alcance y límites claramente establecidos
* Encabezamientos claros y descriptivos
* No se admite el uso de jergas
* Páginas organizadas según necesidades de los usuarios
* Contenido y enlaces adecuados a la audiencia esperada
* Contenido actualizado constantemente; información inactual eliminada o actualizada con prontitud
* Páginas de programas o proyectos deben estar enlazadas con la página matriz de la organización que los financia
* Tener cuidado a la hora de establecer enlaces, asegurándose de que en esos sitios no hay a su vez enlaces a sitios dudosos
* Los enlaces inactivos deben ser eliminados o actualizados con prontitud
* El origen del contenido debe estar bien documentado, ser verificable y exacto
* Las páginas deben ser comprobadas y los enlaces verificados antes de ponerlos a disposición del público.

(Traducción: Cristóbal Pasadas Ureña)

(Accesible en línea en http://diogenes/baylor/edu/Library/LIRT/lirtcrit.html)

67th IFLA Council and General Conference
August 16-25, 2001

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Professional Group: Government Libraries Workshop
Joint Meeting with: -
Meeting Number: 195
Simultaneous Interpretation: -

Strategies for recognition - how to promote government libraries and services

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USA

Abstract:

It is a challenge to promote library services. When developing a public relations plan four questions to ask are: 1) what are you promoting and can staff articulate it?; 2) do you have a mission and can everyone articulate it?; 3) who funds the library services and who can influence those funders?; and 4) who do you serve and how do you tell them about your services? This paper tells the story of how the Trial Court Law Libraries (TCLLs) in Massachusetts have answered these questions.

Library services such as saving materials for future generations, upholding intellectual freedom or helping someone through the reference interview are often difficult to explain to the general public. Government library services as a special service are harder to explain.

So how do you promote government library services? Although each situation is different, this is one story and hopefully, you can use some of our ideas to promote your library.

Who are the TCLLs? The 17 law libraries located in counties in the state trace their origins to an 1842 law allowing lawyers to establish law libraries which, also by law, were and still are open to the public. The TCLLs mission is still to serve the bench, attorneys and the public. 70% of library users are from the legal community and 30% are from the public. The public includes students, businesses and people trying to represent themselves in court. The mission statement can be found on the TCLL web site: www.lawlib.state.ma.us.

The first question to ask is what are you promoting and can staff articulate it. In 1978, the former county law libraries became part of a statewide court system. During the early 1980's, as new staff were hired, the decision was made to hire professional

law librarians who had good customer service skills. In turn, these law librarians hired support staff with strong customer service skills. All staff had to be able to promote law library services to the bench, attorneys and the public.

The second question is do you have a mission and can everyone articulate it. The message needs to be uniform. The TCLL staff developed a mission statement and guidelines for reference service, circulation and inter-library loan. With these in place, staff was trained to provide consistent service from all 17 libraries.
The third question is who funds the library and who can influence those funders. Key to the survival of libraries and their continuation or expansion is having the resources to fulfill the library's mission.

The TCLLs are funded through the state Legislature. The best lobbying group for the TCLLS is public librarians. They understand the Legislative process and can speak of the need for the services the TCLLs can bring to their communities.

Recognizing the need to serve the public in cooperation with public libraries, the TCLL had the chance through two grants to develop pilot projects to better serve the public. The first grant, Legal Information for All, initiated a toll free number so all public libraries could reach a Trial Court Law Librarian. In addition, workshops were conducted to train public librarians on how to use legal resources. The second grant project, On the Road with Legal Information, included visits by law library staff to 128 public libraries to help them assess their legal collections. The outcome of both grants was improved service and higher visibility to public librarians that the TCLLs were a valuable service. The American Association of Law Libraries recognized the TCLLs when they received the first Public Relations Award in 1995. In the early 1990's, when the TCLLs faced a severe funding shortfall, the public librarians lobbied with the Legislature and one million dollars was returned to the budget.

Today, there are six multi-type regions and the TCLLs receive funding from the state library agency to provide telephone service beyond court hours with a toll free phone number, workshops to train librarians in using legal resources and a web site on legal resources. One library receives funding for extended hours (evenings and Sat. morning when court is not open).

The fourth question is who do you serve. Given that you may serve a variety of groups, you need to develop different messages for each groups.

When trying to tell attorneys about the TCLLs, librarians have used different ways such as speaking at Bar Association meetings, interviews on cable/local television programs and articles in newspapers. No matter where a librarian delivers the message, the basic message is the same - the TCLLs are open to public, a person can find what they need and the TCLLs can be contacted by phone, fax, e-mail or come in person.

Outreach to court personnel happens daily by providing professional, quality reference. Court personnel, like so many people, do not inherently understand what libraries can do for them. In the current planning process, TCLL staff will go to the courts with brochures to tell people what services are available to them, and, just as important to answer any questions they have about TCLL services. Also, all staff will be expected to have TCLL brochures and business cards when attending a meeting/conference, each one being a chance for staff to promote the TCLLs. In March 2001, 20 TCLL staff attended the court sponsored Conference on Unrepresented Litigants. An exhibit about the TCLLs was developed. To make sure as many contacts were made as possible, staff were asked to sit at different tables, attend different workshops and to speak up so that participants knew that the TCLLs were part of this conference and their mission was an important part of serving unrepresented litigants.

The TCLL staff also teach computer-assisted legal research to judges which is another opportunity to let judges know the variety of library services and skills available to them. A potential project under discussion is for TCLL staff to teach court interpreters the basic tools of legal research to help them in their jobs.

Outreach to the public continues through public libraries and web sites. E-mail
reference is growing and plans are underway to initiate e-mail reference in real time this year.

In addition to these activities, TCLL library staff belong to a number of professional organizations which also increases their visibility and opportunities to promotes services.

The TCLLs are member of a library consortium (NELLCO - New England Law Library Consortium). NELLCO is currently working with the Gale Group, a library vendor. Gale Group has offered its marketing department to assist in developing sample brochures for NELLCO members to use to publicize their services. It is interesting to work with professional public relations people who ask questions about libraries and what they do. In responding , we became more articulate about what law librarians are able to do and how to communicate that information to others. Eventually, their work products will be available for all at http://www.galgroup.com/library/lib_advo/index.htm.

In summary, there are three groups you need to target. (1) who is important to your library's survival and how to influence them; (2) who do you serve regularly and how to communicate to them; (3) who needs you only for a short time and how can they find you. Although the three groups need to be addressed a little differently, in the end you need a uniform message that can be said over and over and over and in new ways.

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Art libraries and information services network: integrating resources and attaining visibility

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Abstract:

A description of art information services in the city of São Paulo, Brazil, including libraries, archives, documentation sections in art museums and cultural centers, which identifies their main difficulties in accomplishing their objectives. REDARTE-SP is presented as a network of art libraries and information services in that city, created to promote discussion of theoretical, technical and organizational issues facing art information services and to propose projects aiming at the development of those services as well as their professionals. The paper points out that the available services need to attain greater visibility and proposes the development of three basic programs to divulge existing art library and information services, to develop collaborative relationship with other departments within the parent organizations, and to create new approaches to get better knowledge of art information users. Those programs will help to avoid information dispersion and provide a better use of the available resources, and improve quality in art information services and products.

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1. The context

São Paulo is the largest city in Brazil and an important business center in South America. Its relevance in producing, distributing and consuming goods, made this city also representative as an educational and cultural center. The production, circulation and distribution of culture is intensive and audience for culture and cultural spaces – museums, galleries, movie theaters, etc - are increasing, as well as the provision of art courses, books and magazines.

In spite of the effervescence of cultural life in São Paulo, art information services – art libraries, art archives, art documentation services - don't keep up with other spheres of our cultural life. Seen as a whole, their main characteristic is heterogeneity and diversity: various kinds of information services and of subject areas covered, different types of documents, different users and different levels of development. We can find very simple information services living alongside sophisticated ones, which involve complex management and high costs.

A general analysis of such an heterogeneous object emphasizes the situation found in the majority of the services and not in individual cases, which constitutes exceptions. However, this approach does not intend to diminish the importance of the most relevant services in the city, but, on the contrary, to make them responsible for improving the whole, both serving as examples of best practices and acting as leaders for better art information services.

2. The situation
Researches developed in the last fifteen years pointed out some common characteristics found in the majority of the studied libraries: insufficient and sometimes inadequate human resources, shortage of financial resources, insufficient or inadequate physical spaces, obsolete holdings, delay in technical processing and in incorporating automation processes and new technologies. Many of those services are still operating traditionally, with a low automation level and few users.

3. The holdings
Art books are expensive – much more expensive in Brazil than in the Northern Hemisphere - as well as video and audio tapes, cds, photos and everything that is necessary for having a good and contemporary art library. In that context, maintaining updated collections is a challenge, especially to our art museums – public or private – and to our public libraries. The university libraries normally have a better situation because they can count on special financial support from foundations aimed at the development of teaching and research.

Many library collections were formed disorderly around the parent organization, without guidelines for their creation and development. Some of them continue to grow that way due to the lack of policies and to the absence of systematic budgets for acquisitions that lead them to incorporate to their holdings all the material they receive as donation or in exchange. The information services in São Paulo do not make their vocation clear , which would imply defining their subjects of excellence and their target publics. As a result, although as a whole their holdings are very rich, the scenery shows dispersion and duplication, as well as great absences, and some of the holdings are nearing obsolescence since they are not systematically updated.

4. Processes and tools
Technical processing still lacks simplification and standardization. Except for the public universities, they work in isolation, forming their own databases (or even card files). The quality of processing, which interferes directly in information retrieval, reflects the absence of adequate vocabulary control, due to the inexistence of tools for vocabulary control in Portuguese - although some efforts have been made in this direction. Quality of processing is also prejudiced by the insufficient art knowledge of the information professional.

The situation is much more delicate when we analyze the conditions of technical processing of non-book materials.

5. The information unit and the parent organization
The art information services in São Paulo generally are not organically integrated to the mission and activities of their parent institutions. Information work within the organization is sometimes fragmented in corporative spaces, raising obstacles to the information flow and to its access by the

institutional users and by the external public. In the museum, the library, the documentation area and the archive should form a unique information system, acting in an integrated and productive way. Even at the university or at the majority of art schools, we do not find the art library integrated either to the teaching programs, or to research projects or to extension activities. In general, the library is very distant from the daily life of its main users, having a responsive attitude, instead of developing a pro-active action. As isolated entities within their parent organizations and with low levels of utilization, the art information services tend to play a marginal role in their organizations.

6. The users

   In this context , it should not be surprising that the majority of our art information services lacks public. The great exceptions are the university libraries and some museum libraries. In any kind of art information service the most frequent users are the students, followed by the researchers. Art journalists, art editors, art dealers, designers and artists in general are eventual users that look for an information service or library only when they cannot get the information they need with friends or on the Internet. General public is a rare presence in art libraries and information services, in spite of the increasing art audiences in the city.

   There are some explanations for the low use of those services. First of all, there is no publicity of them – people simply do not know of their existence. Secondly, in general, the library opening hours are not adequate to working people: libraries open when people are working and close when they have leisure time. Thirdly, services are sometimes inefficient and the access to information and to the documents takes so much time that people give up at the very first difficulty. Besides that, only a few databases are available on the Internet and generally there are no document delivery facilities for the common user, although we live in a city with great traffic problems.

   Within the organizations, the information professionals should be developing user training programs, since our art students and specialists are not familiar with information sources. Many researchers do not even know traditional available services as Art index , for instance – although many libraries subscribe those services. Consequently, finding information represents a long and dull task in the research activity and the results they get are inefficient. The information professional is neglecting his educational role - he should act as mediator, providing the general public with information and knowledge that will help him understand art and stimulate him to art consumption, production or study.

7. Producing knowledge

   We cannot count too much on Brazilian art information sources – there are few encyclopedias and dictionaries and no abstracting and indexing services. Two or three libraries try to index some articles but none produces abstracts.

   Producing Brazilian art information sources should constitute a cooperative project of our art information professionals. It would stimulate research and contribute to the study and research of Brazilian art, both in our country and abroad.

8. The cooperation

   The solution for the weaknesses pointed by our diagnosis will not be found in isolated actions. For that reason, since July 1998, a group of art information professionals – librarians, archivists, museum workers, etc – decided to work together in order to carefully think and develop cooperative projects. Many of our art information professionals had never met before and do not even know the services that were offered in the city. Therefore the first goal of the group was to put those people in contact and make them familiar with art information services in the city. Each meeting took place in a different information unit and a directory of the art libraries was produced so that they could inform their users about other services. Now the group can count on some stable members who are trying to develop some projects together. One of them aims at giving publicity to the group and includes the creation and development of a site on the Internet. The site will offer information about the services, as well as about information sources, particularly on Brazilian art. The other project intends to organize a Seminar on Copyright, which is a very complex problem faced by the art information services as well as by their parent organizations. In spite of its increasing importance, the group is not formally structured and it still depends on the efforts and on the leadership of some of its members in order to survive. Formalizing the group will give it the necessary visibility and also open some possibilities of getting funding for its projects.

At the national level, our effort is not isolated, since there is already an art librarians group in Rio de Janeiro. We are using the same name –

REDARTE-RJ and REDARTE-SP – and we intend to form a cooperative and productive network and have practical answers to the following questions that I propose be discussed here: (1) how to integrate information services and how to have a strategic role within the parent organization? (2) how to integrate with other services outside the organization? (3) how to increase our public? (4) how to be relevant in cultural life?

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Training staff in the National Art Library

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Abstract:

As the number of online electronic products increase, our students, scholars, and public become more enamored with the ease of access of going online for their information needs rather than turning to the library. Even when the library has paid for the database and negotiated the license to make it available, users are unlikely to understand that the origin of this information is different than other electronic products available free on the web. Libraries with their centuries of accumulated print collections are in danger of becoming warehouses visited only by the hopelessly romantic who cling to the physical book over the monitor.

Hearing our institutional leaders deny funding for expansion of library space because "everything will soon be electronic", and watching students settle for information from popular journals available in full-text online rather than search out the scholarly treatments in a less convenient format, must sound the battle cry for all librarians to engage in the instructional process.

Partnering with teaching faculty or offering workshops in association with popular exhibitions can create new supporters and users for our libraries. Supporters who will help when budgets are imperiled or space wars break out.

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1. **Introduction -** The National Art Library has been an educational institution since its inception. Training has always been a part of its fabric. The Library is equally strong in its two

chief categories: that of staff providing training and of staff receiving training. This workshop presentation will concentrate on the training the National Art Library provides for its staff. Training is provided for staff in terms of their professional development; to enable them to bring more to their present jobs in the Library as well as advance in the profession. Provision is made through the Library's Training Officer supported by the Museum's Training Section. Close co-ordination between the Training section and the Library ensures that a wide variety of training needs are covered. But resource constraints are affecting the Library's ability to continue providing access to a high standard of external training. The question for this workshop is: what approach should the Library take in the future?

2. **Museum Training Section** is a part of the Personnel Department and is responsible for the professional development of all Museum staff. This is done by the following:

2.1 **Induction -** Staff joining the Museum as Curatorial Assistants, the basic curator or professional grade, belong to a training grade. They are provided with an initial programme of induction into all the Museum's curatorial functions.

2.2 **On-Site Training -** first line management; team working; project management; &c.

2.3 **Self-learning centre -** well-equipt with interactive programmes from touch-typing to personal effectiveness and management. The Library has bought software for HTML training which is used to provide tuition to all Library staff.

2.4 **External management courses** involving some weeks at residential centres are paid for by Personnel for senior managers on the recommendation of Department heads.

2.5 **IT** has revolutionized the workplace and brought with it the need to ensure that all librarians are adequately educated to take advantage of developments and also to use their knowledge to raise the standards of information literacy of the Library's users. The Museum pays for all basic entry-level IT training – network system & e-mail; word-processing; spreadsheets; &c.

2.6 **Budget -** Personnel Department provides Museum departments with their own training budgets. Only the Library administers its Training budget independently. I shall address the uses to which this budget is put later on.

3. **Library Training**

3.1 **Induction** - All joining the Library are given a comprehensive induction. This is tailored to the post they are to fill. Senior staff are given a week of meetings and induction which allows them to meet other members of staff and have demonstrated to them the various departmental functions. Curatorial Assistants are given an induction over three weeks. In each of these weeks the first two days are spent in the department which is to be their home for up to the next two years. The remainder of each week is spent in all of the other major departments in turn. This is intended to provide a solid grounding and insight into the work of the Library, and a preparation for future rotation into other departments. It also allows them to integrate quickly.

3.2 **Operational -** Much of the Library's day-to-day training is done in terms of new staff or staff taking on new responsibilities. For example, staff new to the information points in the

Reading Rooms will shadow an experienced librarian on the Counter or Enquiry Desk until judged by Public Services managers to be sufficiently skilled. This has an additional advantage: providing staff with an opportunity to better understand their own work by teaching others.

3.3 **Rotation** - The first professional librarian grade in the National Art Library is a training grade, and these Curatorial Assistants or Assistant Librarians will have the opportunity to work in all Library departments and sections.

Of the Library's five departments only three have Curatorial Assistant posts to which staff are circulated on a bi-annual rotation. The division between the departments is unequal which makes it difficult to provide a balanced distribution. It is also impossible to provide a concrete circulation programme because the turn-over of leavers and starters precludes such planning.

3.4 **Tutoring** – The Library supports work towards the Associateship of the Library Association which is tutored by a senior member of staff.

3.5 NAL Training Programme

The Training officer is responsible for organizing an internal training programme. This takes place on Monday mornings and ranges widely:

3.5.1 Every six weeks a Public Services training session is held conducted by the Information Services Manager. Compulsory for all members of staff who contribute to running the reading rooms, this is an opportunity to inform on changes in operational procedures, to receive feedback and suggestions on procedural matters. It is a major tool in maintaining service standards.

3.5.2 Other available Mondays will have training sessions conducted by the staff responsible for the following: Copyright; The Web and html editing; Cataloguing Surgery (where catalogue developments and problems can be communicated); Conservation; Health & Safety; Book art; Manuscripts & illumination; Bindings; Typography; Analytical/Historical Bibliography; Book History; &c.

3.5.3 Group visits to other libraries are arranged.

3.5.4 External speakers are invited (funds permitting); e.g. the last was given by a lecturer in fashion design who had been a Royal College of Art/V&A student and had used the Library intensively. Apart from the subject, we were privileged to learn a good deal about our appeal, respectively the terrors, experienced by students wanting to use our services.

3.6 External - All staff are encouraged to develop professional expertise and subject knowledge by attending courses of study, conferences, seminars, away-days, skills training, &c.. A wide variety of subjects are considered: management; curatorial skills; conservation; professional skills such as cataloguing, information provision, &c.. Substantial assistance is given to those undertaking higher degrees in subjects of relevance to their work or to the work of the Library.

4. **Allocation** - Training is targeted by means of the annual staff appraisal. This includes a Professional Development Plan which is agreed with the line-manager and sets out areas of development that should be pursued. A two-way process is involved: staff make suggestions and

managers make suggestions. Both the Museum's Training Section and the Library's Training Officer use these to ensure that training applied for or offered is appropriate. A competencies project has been started which will document all the skills needed to do a job. This will mean increased targeting of training from the moment a member of staff is appointed. External events that have to be paid for necessarily and increasingly form a small part of the total. More IT skills are needed and the courses rapidly increase in cost.

4.1 Application is made on a form and agreed to if the course or event is of an adequate professional standard; if the line manager agrees and it is reflected in the Professional Development Plan..

5. **Budget -** The budget given for external courses this year is £7,500. This is the same as last year (when it was given in two six month tranches which made budgeting especially difficult). The year before the budget was £10,000. We request is excess of £30,000 and it is impossible to adequately provide for 60-70 staff from a budget of this size.

6. **Question** – What training programmes do your libraries offer and what should we be aiming to provide?

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Joint Meeting with:	National Libraries **Workshop**
Meeting Number:	199
Simultaneous Interpretation:	-

National Bibliographies and the International Conference on National Bibliographic Services Recommendations: Introduction

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BACKGROUND

Project Assignment (1999/2000)

Towards the end of 1999 the Standing Committee on Bibliography appointed a Working Group consisting of Barbara L. Bell, The College of Wooster, Ohio and Anne M.H. Langballe, National Library of Norway, Oslo Division, with a charge to:

1) Identify those national bibliographic services which are especially effective by virtue of their ability to meet the criteria and provide the features identified in ICNBS (International Conference on National Bibliographic Services) Recommendations 5-11; and,
2) Identify those Services that could improve effectiveness through greater conformance to these Recommendations, suggesting ways to request that they implement ICNBS Recommendations.

In addition, Recommendation 1 (on legal deposit legislation) was later added to the charge, as this turned out to be useful in connection with the other points examined.

The Standing Committee suggested that the basis of the work be Barbara L. Bell's *An annotated guide to current national bibliographies*, München: Saur, 1998 and viewed it as a one year project with some funding from IFLA.

Working methods

The Working Group observed time frame set by the Standing Committee and established an approach that would make it possible to finish the project within one year.

Bell spent spring 2000 in Stellenbosch, the Republic of South Africa, autumn 2000 and spring 2001 at home in Ohio. Langballe has been at home in Oslo, Norway for the duration of the project. The investigators maintained communications by e-mail and fax. Since Bell was commissioned by the National Library of Norway to evaluate the Norwegian National Bibliography, the authors were able meet to discuss their project during her stay in Norway in June 2000.

The authors divided responsibility for their investigation, as follows, taking into account language difficulties:
Bell: Africa, the Middle East, and Asia (East, South, Southeast, Central and Transcaucasia)
Langballe: Europe, North America (including Central America and Caribbean), South America, and Oceania with Australia and New Zealand.

The basis of the work was Bell's *Annotated Guide*. In addition, all printed bibliographies or CD-ROMs found in Oslo and Stellenbosch have been examined. Several printed national bibliographies consist of more than one part – e.g. a monograph part, a serial part, an article part – and many are published in more than one format. As a result, the authors decided to examine one part (usually the monograph part) and at least one format, assuming that findings regarding this part would be typical for the whole national bibliography. All home pages of national libraries on the Internet were searched for information about the national bibliography; these were found through *Gabriel, the information service for the National Libraries of Europe*, IFLANET's list *Web Accessible National and Major Libraries*, *Directory of LAP* [Libraries of Asia and Pacific], and search robots.

In filling out worksheets, the investigators discovered that a few of the ICNBS Recommendations called for specific information not readily available in the sources they were using. For example, Recommendations addressed how national bibliographic agencies accommodated national bibliography users with special needs. They also addressed where copyright, availability, ISSN, and price were given in the national bibliography (on the title page, its verso, or in an introduction of the national bibliography), and whether a certain script was used in the bibliographic records. For specific points such as these, it was necessary to view a current issue of the national bibliography.

During autumn 2000 and spring 2001, the authors traveled to libraries where bibliographies they needed to view could be found: Langballe went to Stockholm, Sweden, and Bell to the Library of Congress as well as the University of Wisconsin, Madison. As there were still some bibliographies left to be seen, the lending departments of their own libraries helped by borrowing them or obtaining copies of relevant pages from foreign libraries' holdings.

To a certain extent the authors also corresponded with national libraries to get more information. They decided not to contact all national bibliographies in order to be able to answer all details of recommendations 5-11. This was partly due to time constraints; also because, in compiling her book, Bell had requested national bibliographies to provide information about their future plans. However, as Bell's *Annotated Guide* was published in 1998 and the volumes she examined for that work sometimes had been published some years earlier, it is likely that some national bibliographies may have experienced changes. Such changes would most likely have occurred in cases of national bibliographies that had individuals attending the ICNBS to represent them. In August, the investigators sent a letter, including with it the ICNBS Recommendations, to the participating agencies asking them to advise whether changes had been made to their national bibliography as a result of these Recommendations. Of 71 letters sent, the authors received 30 replies, for a return rate of 42.3 %. The information received is now part of their findings. They used the participants list of the Programme and addresses found on IFLA's *National Libraries of the World: an Address List*, as the ICNBS Conference Secretariat was not able to provide an updated participants' address list. The inquiry was sent by e-mail (when such address was found and worked), fax, or post. In some cases, but not all, unanswered letters were sent again during the autumn. Bell was able to supplement information about southern African countries with information derived from a recent investigation conducted for another article. The authors believe the 42.3 % return rate noted above is disappointing, but feel that they may not have reached the appropriate addressees in some cases. On the other hand, many answers were very encouraging and led to more correspondence. The national bibliography of the Czech Republic was the first to reply and which proved very helpful on several later occasions later. Also meriting special mention were the national bibliography in Mongolia, where the Recommendations were translated and published in their library journal; and the national bibliography of Jamaica, which thanked the authors for their interest.

The authors have also read several articles on national bibliographies published in library journals during 2000-2001 and consulted with subject bibliographers who had expertise in specific countries.

The authors are aware of the fluidity of the field of national bibliographies, particularly with regard to the use of electronics in creating various formats. Consequently, they have consulted the separate studies undertaken by Robert Holley and John Byrum; the authors also checked for Web sites that might not have been available one or two years ago. Even with this the authors know that important information must have been overlooked. In the compilation of the *Annotated Guide* the national bibliographies were asked to report future plans, and it is gratifying to see now that many of these plans have been implemented. Equally, it is sad to see that, in some cases, civil war, natural disasters, and other unforeseen problems have kept national bibliographic agencies from accomplishing goals.

In summary, there are only a few bibliographies the authors did not see either as a print, CD-ROM, or Web version – or through copies of some pages. But, despite attempts, in many cases they did not prove able to view the newest issues. And, the authors may not have been able to update the information of the *Annotated Guide* in other ways either. So there are certainly developments of which they probably are not aware, so some information reported below may be outdated. This is also true, because developments often happen quickly in this field. Thus, in several cases, information noted from home pages in February 2000 when the investigation began no long applied when rechecked in November. As the latest revision of the ICNBS *Final Recommendations* was February 2, 1999, they were not implemented in the national bibliographies before the volume covering 1999, only in the "best" cases published in 2000. So probably more changes will be seen in the following years – especially concerning inclusion of remote electronic resources, standard number systems for those, and metadata.

This survey compared to earlier surveys

Members of the Standing Committee on Bibliography have conducted two surveys related to features of national bibliographies in recent years: Robert Holley's "Survey on bibliographic control and national bibliography" and John Byrum's "Inclusion of information covering electronic resources in national bibliographies".

Both surveys concentrated on types of documents included in the national bibliographies. Holley's also focused on standards used. The current survey, however, mainly deals with the *formal presentation* of document descriptions included in the bibliographies and of the *formal presentation* of the bibliography itself, but also looks at standards used. In accordance with the *Final recommendations of the International Conference on National Bibliographic Services* of 1999, paragraphs 1, 5-11, the questions which this study attempted to answer have been:

- Is there a current legal deposit law?
- Does the bibliography follow international standards when describing documents?
- Is the bibliography arranged in a user-friendly way?
- Are there enough indexes or search possibilities to enable efficient information retrieval?
- Is there a user-friendly introduction that describes the bibliography properly as to what is included and how the information is arranged?
- What would make this a better national bibliography?
- What can the Standing Committee do to encourage NBAs to implement the ICNBS Recommendations?

The authors sincerely hope theirs report will be useful to the IFLA Standing Committee on Bibliography.

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National bibliographies and the International Conference on National Bibliographic Services recommendations: Europe; North, Central and South America; and Oceania

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This part of the survey covered Europe, North America (including Central America and the Caribbean), South America, and Oceania with Australia and New Zealand, involving the national bibliographies of some 81 countries. Of these, 44 belonged to Europe (the 45th, Kazakhstan, is treated below in the Asia part of the survey), 19 to North America (North America, three; Central America, seven; Caribbean; nine), 13 to South America, and five to Oceania

Legal deposit laws and national bibliographies

Of the 81 countries mentioned above, 18 do not have a current national bibliography or a substitute – two in Europe; five in Central America, four in Caribbean; five in South America; two in Oceania. A few of these are included bibliographies produced by other countries or in regional bibliographies. In some cases the findings have included substitute bibliographies, following the practices of Bell's *Annotated Guide*. It is sometimes easy to understand why a bibliography might not exist, due to poverty, wars, or natural catastrophes. But this pattern is not consistent – there are countries lacking a national bibliography for no apparent reason, and some countries where a national bibliography exists despite war and bombing. An example is Bosnia-Hercegovina where a bibliography was published even after the destruction of the national library. Therefore, an important task for the IFLA Section on Bibliography should be to find ways to encourage and help countries initiate a national bibliography.

Normally, there is a strong connection between the existence of legal deposit laws and the publishing of a national bibliography. Of the 81 countries examined in this part, nine were found to lack such laws and a few others operated under provisions of an ineffective legal deposit law. However, these countries without effective deposit requirements are not necessarily those that do not produce a national bibliography; for instance, there may exist a well-functioning agreement with booksellers. On the other hand, there may exist a deposit law and deposit, but no national bibliography. Nevertheless, the typical pattern is one where a current national bibliography goes hand in hand with legal deposit.

Two events of the late 1980s and 1990s provided the background for several new legal deposit laws or amendments to existing laws: the emergence of the new electronic media; and in Europe and Asia, the collapse of Communist regimes and the break-up of the Soviet Union. The survey found 26 new or amended deposit laws dating from this period and nine that are still in progress. Of these 23 pertain to European nations. In some cases, new laws were passed in the 1990s when a country became independent, and a new law or amendment including electronic media, especially the Internet resources, was passed a few years later. The importance attached to the national bibliography by newly independent countries is striking!

The agency responsible for publishing the national bibliography is usually the national library. There are some exceptions: In Denmark, a major component results from a agreement with a commercial corporation. Six countries (four of them in Europe) have decentralised cataloguing to a certain extent and one country is planing to pursue decentralisation. But, in all eight cases, the national libraries of these countries retain editorial responsibility. In four East European countries, the institution known in English as "the Book Chamber" still compiles the bibliography; in two of these, the national library also does – and in a few cases it is made by private individuals.

Coverage and scripts

Typically, in a national bibliography, documents in all languages published in the country are included. Surprisingly, the bibliography in addition often includes foreign publications, written by the country's citizens and published abroad, or written by foreigners about the country. ICNBS Recommendation 5 state that whenever possible documents should be registered in the script as it is written. But, this practice is seldom observed and only found was characteristic in nine of the bibliographies examined. Several of these are former Soviet and Balkan states which register Cyrillic and Latin script, and two (the Greek part of Cyprus and Greece) include Latin and Greek script. In such bibliographies, which feature two scripts, other scripts than the two (e.g. Arabic) were transcribed in Latin, but few examples of entries that originally must have had other scripts than the two included were found. It is, of course, due to technical problems in connection with registration as well as searching of the bibliography that transcription or transliteration is preferred. Transcription systems used by the bibliographies were rarely identified in the introductions; additionally, no outline of script conversion schemes was found in any bibliography. Perhaps Recommendation 9, which asks for outlines of script conversion schemes, should instead call upon the makers of the national bibliographies to name the transcription system(s) used in the introduction.

Formats of the national bibliographies

The printed bibliography still has a very strong position among alternative formats. Even though most countries studied in this section now have an electronically based bibliography, only 12 of the 61 bibliographies do not exist in printed versions. Of these, four are European (not including the Norwegian national bibliography in which only the section for monographs is printed); four are North/Central American; two are South American; and two are Oceanian.

Microform is "out". Only seven countries seem to publish in this format.

Only 13 countries seem not to have an online version – however, several of these are planning automation. In several cases, the online bibliography is in fact part of the library's online catalogue, or a union catalogue, and cannot be searched as a separate entity. This is the case also with the Web versions – usually the catalogue can be searched through the Web, not the bibliography. However, in cases where the national bibliography is available on the Web, password and payment are often required. Free or fee-based Web versions were found in the cases of 11 national bibliographies: those of Denmark, Finland, Germany, Iceland, Norway, Poland, United Kingdom, Wales, Canada, Chile, and New Zealand. In addition, numerous Web catalogues were discovered as were four national bibliography "lists of new books" on the Web; such lists will be further discussed below.

CD-ROM versions of national bibliographies are published in 22 countries (18 European; Canada; the Brazil; New Zealand and Tokelau in Oceania). However, several national bibliographies published in this format during the 1980s and 1990s have discontinued producing CD-ROM versions. As a practical matter introductory information, including a title-page equivalent as well as data about cataloguing and classification tools, should be included on the CD-ROM itself. However, CD-ROM is often installed on a local network, and such information is lost to the users if it is only found in an accompanying paper manual.

Information on the web

The Web offers unique possibilities for national libraries to convey information about themselves and their activities. A good source to consult for addresses to Web accessible national libraries is IFLA's list: *Web Accessible National and Major Libraries* (**http://www.ifla.org/II/natlibs.htm**). But, one is advised to check this listing regularly, given the problem of reliable URLs; for example, when checked in May 2001, ten dead links to formerly accessible home pages were encountered.

Having found the national library homepage, it is somewhat surprising that it may prove challenging to locate information about the nation bibliography. Since one would reasonably consider the national bibliography to be a major activity of a national library, one would expect to be able to access information about it in a menu heading – for instance under "Services" or "Databases" or "Activities", or – why not? – "National Bibliography". But, sometimes the national bibliography is only located by means of a "Search the homepage" box. And, in some cases it was necessary to collect bits of information found here and there.

Out of several possibilities, on the other hand, the New Zealand homepages provide a very good example where such information is easily found. Here one can choose between Maori and English texts. To access the English text, click on **http://www.natlib.govt.nz/index1.html**; next, click on "New Zealand National Bibliography" and go on to **http://tepuna.natlib.govt.nz/abouttp/abnznb/about.html** for the monthly lists of new documents and a link to information about the bibliography.

A Web site can also offer the possibility of linking a search page of the national bibliography (or catalogue) to relevant information about the bibliography or catalogue. Here are examples of how that's done in Denmark and Norway:

Denmark: **http://www.kb.dk./formidl/natbib/** – with a list (but only in Danish) of the parts of the national bibliography with links to descriptions of the parts and to search pages of some of the parts.

Norway: **http://www.nb.no/baser/** – with a list (now only in Norwegian, but an English version is under development) of the parts of the national bibliography and links to descriptions and search pages of all parts – in Norwegian and English.

Timeliness

Already mentioned has been a feature of "lists of new books" on the Web. In 2000, four of the countries with national bibliographies studied in this part of the report had initiated such lists: Belgium, Hungary, Sweden, and New Zealand. The *New Zealand National Bibliography* serves as a good example to demonstrate this feature. The Web page includes a table of contents, showing that the Dewey Decimal Classification is used, and a short introduction.
http://tepuna.natlib.govt.nz/abouttp/abnznb/about.html

The other lists are found at:
Belgium: **http://www.kbr.be/bb/fr/Bbstr1.htm**
Hungary: **http://www.oszk.hu/mnbkb/index-en.html**
Sweden: **http://www.svb.se/svbokforteckn.htm**

Such Web lists are still few in number – but many countries have printed lists of new books covering the last month or two, or some other interval. Many bibliographies have cumulated annual and/or multi-annual volumes, while some have only cumulated indexes. Timeliness is a weak point of many otherwise good bibliographies. In several countries national bibliographies are working to improve in this area. For example, Peru succeeded in publishing *Adenda 1990-98* in February 2000 and the 1999 volume in April 2000. Swaziland and Sweden also have managed to speed up their process; their experiences should provide others with useful ideas for achieving more timely presentations.

Information in the bibliography on the bibliography

ICNBS Recommendations 8 and 9 list information that should be found in a national bibliography for identification purposes and to ease the use of the bibliography – such information as period covered, place, name and address of the publisher, copyright information, CIP, price. These Recommendations also urge inclusion of an introduction stating the basis of the records, coverage, classification and cataloguing tools, list of abbreviations, etc.

During the ICNBS Conference, several participants suggested that the introduction ought to be given in a world language in addition to the country's own language. For example, in the Norwegian national bibliography the introduction should also be added in English (or German, etc.). Even though, this point was not included in the recommendations, and the authors of this report want to encourage bibliographies to consider providing the additional introduction to facilitate comprehension by users whose knowledge may not include the language in which the bibliography is compiled.

It was previously mentioned that most of the recommended information could be found in the printed versions of national bibliographies and that it proved more difficult to find such information in the electronic versions. In a few cases, however, the introduction was missing or was very short (only four to five lines). Data elements often missing in introductions otherwise judged as sufficient included: price, CIP (not all countries practice CIP, of course), and the addresses of publishers. Descriptions of filing system used by the bibliography were seldom given in detail. Exceptions are Estonia and Latvia, which give their complete alphabets. At least the introductory remarks ought to explain where special letters that are found in many countries' alphabets are filed. Description of "systems requirements" is especially needed for the for CD-ROM versions of bibliographies; such details were given in the manual of the few that were examined. New Zealand also gives this information on the web.

Arrangement of the bibliography

For the printed bibliography, arrangement concerns main parts and indexes, for the online versions also search possibilities. In the printed editions, arrangement according to classification or broader subject groups is still the predominant approach. There are several relevant indexes in most bibliographies. In the electronic versions it is usually possible for the user to choose between a simple and an advanced search page (the latter offering choices of searching words by rolling menus and using Boolean operators). In addition to the more common searching approaches such as authors' names, titles, title words, subjects, and classification symbols, several systems offer the possibility to search for (or limit by) language, country of publishing, categories like juvenile literature, biographies, festschriften etc. – indeed, all or most coded fields contained by MARC formats.

International standards and principles used by the bibliography

A MARC format (often a national version) is used in most electronic bibliographies. For cataloguing, the ISBDs or AACR2 are the standards normally used, often also according to a national version. The classification used in most bibliographies is usually DDC or UDC; to a lesser extent are used "broad subject groups" (usually based on Unesco's). Three countries use Library of Congress classification, a couple have national schemes, and a few have no classification at all. The authors recommend that the full title of the actual cataloguing and classification code be given in the introduction to the national bibliographies – not just "ISBD" or "DDC" or "UDC".

Authority control is a topic seldom mentioned in the introduction. An exception is the Greek national bibliography, where it is stated that there is not a proper authority control because of the declination of proper names. In the Web catalogues, especially where older records are concerned, different forms of the same name were found. Even though authority control is not mentioned, it is obviously widely practised, no examples of different forms of the same name were found in the printed bibliographies that were examined for this study.

Brazil and Chile have very good authority files on the Web, Brazil to the catalogue, Chile to the bibliography/catalogue:

Brazil: http://www.bn.br/index2.html
Click "Cátalogo de Autoridades – Nomes" and go on to "Nomes Pessoais" and search for e.g. *Hanibal* – and find the chosen form *Aníbal* and several references.

Chile: http://200.28.149.230:4505/ALEPH/SESSION-93062/start/libros
Click "Hojear" and choose "Autor" from the rolling menu. Write name; name found (main form or reference) has a link to a Library of Congress Name Authority Record.

Finally, regarding ISSN, ISBN, and other standard numbers: As only monograph parts of the national bibliography were examined, the authors assume that ISSN is included in cases where the ISBN is given. Most national bibliographies include standard numbers in the entries – only 12 out of 61 bibliographies examined for this section of the report do not. No examples of URNs were discovered, probably because there are presently few examples of works for which such numbers have been provided.

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National Bibliographies and the International Conference on National Bibliographic Services Recommendations: Africa, Middle East, and Asia

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Brief Overview

This report covers the geographic areas of Africa, the Middle East, Asia and Transcaucasia. Of the103 countries included in these areas, 67 have national bibliographies or suitable substitutes, while 36 do not have national bibliographies. In percentages, about 65% have national bibliographies, and 34% do not. The newest national bibliographies (by beginning publication date) or "new beginnings" are from the countries of Brunei (1996), Namibia (1996), Armenia (1995), Maldives (1995?), Bahrain (1991), Turkmenistan (1991), and the United Arab Emirates (1990). The oldest national bibliographies date from the 1920s (publication date): Azerbaijan (1926), Georgia (1925), Israel (1924), and Turkey (1924). The heyday for the beginnings of national bibliography in these geographic areas was from 1960 to 1980, during which 44 began publication -- with the majority beginning in the 1970s and 1980s. A general breakdown by geographic areas is as follows.

Of the 53 African countries, over half (29 or 55%) have national bibliographies or substitutes; 24 or 45% have no national bibliographies. Lesotho and the Sudan have substitutes, and Angola, Cote d'Ivoire, and probably DR Congo are in hiatus. The first national bibliographies in Africa were from South Africa (with the forerunner of *SANB* titled *Publications received in terms of Copyright Act No. 9 of 1916*, published from 1933-1958) and Nigeria (with a forerunner to *The National bibliography of Nigeria*'s titled *Nigerian publications: current national bibliography* with coverage 1950/52-1970). Most national bibliographies have been in existence for more than three decades. The first automated current national bibliography was in South Africa. The newest bibliography is Namibia (1996).

The Middle East countries include 15 countries and one "territory/state". Eleven countries have a national bibliography or a suitable substitute. Five countries do not have a national bibliography: Djibouti, Lebanon, Oman, Saudi Arabia, and Yemen. Of these countries, Lebanon and Saudi Arabia have a National Bibliographic Agency (NBA). Legal deposit exists in Lebanon, Saudi Arabia, and Yemen. Thus, Lebanon and Saudi Arabia have the infrastructure in place to establish a national bibliography, that is, they have both a national library and legal deposit legislation. The first national bibliographies in this area were Israel and Turkey in the 1920s. The newest are Bahrain (1991) and United Arab Emirates (1990).

Asia and Transcaucasia include 34 countries. There are 26 national bibliographies. Eight countries do not have a current bibliography. Of those, three are actively working towards that goal. Of geographic areas covered in this part of the survey, it is this area which has the highest percentage (76%) of national bibliographies for the number of countries -- with prospects for this increasing in the near future. The newest are Brunei (1996), and the Maldives (1995?); the oldest are Indonesia (1950), Japan (1948), and Turkmenistan (new title in 1991, but has had continuous coverage since 1930). Armenia falls into both the newest (new title in 1995) and oldest categories (since 1925).

The specific details are in the full report submitted to the Standing Committee on Bibliography. This presentation summarizes information about how the national bibliographies within the areas identified above adhere to ICNBS Recommendations 1, 5-11.

Legal deposit (ICNBS Recommendation 1)

Of the 103 countries, 65 have legal deposit laws, 33 do not, and five countries are "not known." Of the 65 with legal deposit, 15 countries have laws dating after 1985. Egypt (1995), Namibia (2000), Japan (2000), South Africa (1997), Singapore (1995), Zambia (1995) are the most recent of these. Of the remainder, the national bibliographies of 48 countries date from 1985 or earlier while those of two are in the updating process (Botswana, Thailand).

The year 1985 was chosen because that date represents the threshold when many new technologies and formats began to be produced more widely. It is important that categories of materials such as CD-ROMs and videos be included by legal deposit legislation. Above all, publishers and NBAs need to communicate and cooperate to achieve effective legal deposit. The National Library of Gambia, for example, cites the necessity of visiting publishers to track down elusive titles; unfortunately, this is not an uncommon occurrence. Countries lacking effective deposit laws are not able to produce a timely national bibliography in most cases.

Coverage (Language and Scripts) (ICNBS Recommendation 5)

A national bibliography should reflect the culture of the country. Countries in the geographic areas covered in this presentation have several languages represented in their national bibliographies.[1]

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[1] For this study no attempt was made to determine if all published languages found in a country appear in the national bibliography. That would have taken longer to determine than we had. This is an important point, one that is certainly covered by this recommendation and also in Recommendation no. 4. In our report to the Standing Committee we have given information about the languages that we found in the national bibliographies.

African countries with several languages represented in their national bibliographies are:

Ethiopia, 8 (Amharic, English, Italian, French, German, Arabic, Geez, Tigrinya); Namibia, 20 (in their language index they list 19 languages, plus English);
Nigeria, 7 (it is not known how many of the over 250 languages and dialects [2] are in print.);
Zimbabwe, 4;
Libya, 4 (Arabic, English, French, Italian);
Kenya, 3 plus many others (42 are listed in their abbreviations index).

South Africa's national bibliography, however, has now been changed to include only English, since the National Library of South Africa does not have the resources available to catalogue in all eleven official South African languages.

India has 14 languages represented in its national bibliography, and Nepal has six languages.

Middle East countries of Israel, Turkey, UAE all have at least two languages represented.

Indonesia has over 400 languages and dialects, as well as English. Malaysia registers English, Chinese, Malay, Tamil, and East Malaysian languages. Papua New Guinea lists titles in Melanesian and English. Philippines lists titles in English, Filipino, and other Philippine languages such as Tagalog, Ilocano, Cebuano, etc. Singapore includes Malay, Chinese, Tamil, and English. Thailand lists titles in Thai and English, and Vietnam lists Vietnamese. Brunei includes entries in the Malay and English languages, but not any entries in Chinese or Arabic scripts. The Chinese National Bibliography states that it includes 21 minority languages.

Because of recent history, the Russian language has been the dominant language in all of the national bibliographies from Central Asia and Transcaucasia. Now that all (except Mongolia) are CIS countries, their own language will begin to appear as the dominant language in the national bibliographies. Russian, Kazakh, Kyrgyz, Turkmen, Uzbek, Karakalpakski, Georgian, Armenian, and Azerbaijani are languages that appear in the appropriate national bibliographies; Mongol is the predominant language in Mongolia. This is both exhilarating and bewildering to librarians and researchers across the world who are reeling from adjustments to all of these languages other than Russian.

As one is aware, there are many non-Roman scripts represented in the national bibliographies of these geographic areas. The ICNBS Recommendations urge countries to list the publications in the original script whenever possible. Arabic is widely represented in the northern African countries, Bahrain, Iraq, Jordan, Kuwait, Palestine, Qatar, Syria, and United Arab Emirates. Other non-Roman scripts are Persian (Iran), Hebrew (Israel), Kurdish (Iraq), Turkoman (Iraq), Thai, Chinese characters, Cyrillic, Georgian, and Armenian to name several. In all cases for the South Asia countries, except the Maldives, the script is transliterated into the Roman alphabet using diacritical marks. So far, computer software used has not been able to handle the script. In South East Asia, Romanized scripts are included in the Indonesian national bibliography; but some scripts do not have transliteration schemes, so books in such scripts are not presently included; Arabic scripts are Romanized. Malaysia seems to have handled the Chinese and Tamil without transliterating. Singapore has managed to accommodate in one sequence script characters as well as non-script characters. Singapore does not provide information on non-Romanized script, and transliterates when necessary.

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[2] Some estimates have been closer to 400.

In summary, countries are striving to meet the recommendation to create records in the same language and script as the publication. Some common problems experienced in meeting this recommendation are the limitations of computer software and the lack of trained staff to handle the diversity of languages.

Presentation (Format) (ICNBS Recommendation 6)

The printed format is, by far, the most popular format in these countries. Paper editions are important since many libraries in a country do not have computers or Web access even though the national library may. It may also be the preferred format for preservation. All but Singapore, Malaysia, and South Africa (temporary suspension?) have national bibliographies issued in the printed format. Of these countries, around 52 to 55 national bibliographies are available only in paper. Thirteen countries publish their national bibliography in more than one format. Seven countries have CD-ROM format, and four are considering it. Microfiche, magnetic tape, and disks are available in only a few countries from these regions.

Web sites are listed for Japan, Namibia, Swaziland (through the university catalogue), Israel, Turkey, and Taiwan (planning), Thailand (planning), Vietnam (planning) and Zimbabwe (considering). One can confidently predict that this list will grow in the coming years. As indicated in Anne Langballe's presentation, it is often difficult to find the national bibliography or information about it on the national library's homepage. The national library should be encouraged to promote ease of access to the national bibliography.

Other formats for national bibliographies in these areas are through subscriptions to providers such as OCLC, and via the database SACat (available by subscription through SABINET (South Africa)), cartridge tapes (Singapore), or online (Georgia -- planning stages).

This recommendation states that at least one national bibliography format should meet archiving and preservation needs and should be permanently accessible. As mentioned, the majority of the national bibliographies are in printed format only; therefore, it is important that acid-free ink and paper be used. This needs to be stressed with countries that currently use newsprint. Also, accessibility needs to be assured for CD-ROM and tape products.

One area that was not evident in any national bibliography examined was its means of access to meet the needs of special users. It may be too soon to see how this part of the recommendation will be fulfilled. It is up to each national bibliographic agency to make that decision.

Timeliness and distribution (ICNBS Recommendation 7)

It is necessary to break this category down into three areas: 1) timeliness of entry records, 2) timeliness of the publication date of the national bibliography, and 3) timeliness in distributing the national bibliography from the publication date to its destination.

Timeliness of entry records

The timeliness of entry records listed in the national bibliography has improved in the last several years, although there are still countries where further improvement is needed. It would aid the user of national bibliographies to have scope notes clearly stated in the introduction. If a national bibliography includes the current year and one earlier year (or titles recently received and not yet listed) that fact should be stated. With automated procedures in more countries, it is also relatively easy to limit entries by imprint date. Of the 27 African national bibliographies analyzed for this first category, 18 are adequate in listing timely entries, and nine need to improve. It proved difficult to identify timeliness of entries in the Arabic national bibliographies. However, in general, entries were for the year covered or for one/two years earlier. Exceptions to this pattern were Iraq (many entries for earlier years), and possibly the United Arab Emirates. Non-Arabic Middle East countries should improve in the coming years. Israel has now completed its computerization project and should become more timely as a result; entries from Turkey and Iran are from the period covered or one/two years earlier.

The entries included in the national bibliographies of Bangladesh, India, Maldives, Nepal, and Sri Lanka have been timely and within the stated period of coverage. Pakistan needs to improve the timeliness of the entries in covering a specific time period. It is expected that the next issue of the Maldives National Bibliography will have a smaller coverage period in order to provide users with more timely information. With the exception of Singapore, the seven other countries of South East Asia need to work on having entries more timely for the period covered (or within a specific stated scope, e.g., two previous years). Timeliness in listing current imprints for East Asia seems to be met in Japan (88% are from the year covered in the volume checked), Hong Kong, and Korea. For China and Taiwan dates were not analyzed for currency (not in Roman alphabet), although one can be fairly certain that the imprints are from the time period. For the national bibliographies where it was possible to obtain recent issues, entries analyzed in Central Asia, and Transcaucasia (Armenia) appear to be timely.

Timeliness of the publication date of the national bibliography

The second category is a major factor in contributing to an untimely national bibliography. Some of the national bibliographies covered in this presentation may have timely entries, but the national bibliography becomes untimely because of the publication process. There are several reasons causing such delays -- e.g., lack of staff, financial limitations, and government bureaucracy. Some countries publish their national bibliographies in a multi-year volume. Even if the records from the national bibliography are for the period covered, this delay in publication causes the bibliography to be untimely. If possible, these multi-year volumes should become annuals.

In Africa, for one of the above reasons, thirteen countries need to improve in this second category. In the Middle East, Iran and Turkey (which should improve after automation) are doing well. For one of the reasons stated above, other Middle East countries need to work on shortening the gap between the period of coverage and the publication date. The time between the stated coverage date and the date of publication of the national bibliography needs to be improved in all of the countries of South Asia. There have been some recent attempts to improve in Bangladesh, Pakistan, and Sri Lanka. The national bibliography of Nepal, now independent of the *Journal of the Nepal Research Centre*, should be able to set its own publication schedule. The national bibliographies of Japan, Korea, and Taiwan are doing well in this area, but most of the rest of Asia needs to improve their publication dates to achieve timeliness.

Timeliness in distributing the national bibliography from the publication date to its destination

The third category, time from the date of publication to the national bibliography's arrival at its destination, needs to improve. Reasons for this untimeliness vary. Some countries that have several issues per year may "batch mail" all issues of the national bibliography only once a year. The rising cost of postage may determine that national bibliographies go by surface mail or as printed matter. However, once the publication is available it needs to reach to its destination so that new titles can be utilized in timely fashion. Sometimes it is hard to convince government bureaucracies to speed up this final step. Countries doing well in this area are: Algeria, Ghana, Kenya, Libya, Madagascar, Senegal, South Africa, Swaziland, Zimbabwe, Singapore, Papua New Guinea, and Hong Kong. All other countries need to improve.

Countries that are doing well in all three of these areas should be commended: Swaziland (since 1998), and South Africa (although now the national bibliography is in non-print format and harder to identify as a national bibliography--e.g. SANB is available by subscription as a part of the OCLC database or via access to SABINET) and Singapore. Some countries are beginning to improve in one or more of the areas, such as Libya achieving a more timely publication date and Sri Lanka with increased frequency and more timely entries. Overall, it is heartening to see a vast improvement in the timeliness of entry records from a few years ago. The publishing schedule and distribution need serious attention to make for timely national bibliographies. Communication on intent of publication would be a guideline for people waiting for the latest issue, especially if a publication schedule can not be met. India has done this in the past, as has Botswana.

In summary, many national bibliographies have improved the listing of timely records for the period covered. Areas that need to be further addressed are (1) the length of time from the period of coverage to the publication date and (2) the distribution time lag.

INFORMATION INCLUDED ON THE NATIONAL BIBLIOGRAPHY ITSELF (ICNBS Recommendation 8)

This recommendation includes basic but important guidelines about provision of data needed to help the user identify and gather information about the national bibliography. In the African countries details about the availability (where and how to purchase the national bibliography) and price of the national bibliography itself are missing in a surprising number of national bibliographies. Slightly less than half of the national bibliographies in the geographic areas covered in this paper do not have the ISSN or ISBN on the national bibliography itself. This number exists for some of the national bibliography titles even if the country does not participate in the ISSN program. It would be an important and straightforward for Bibliography Section's Standing Committee to address this matter.

- Availability information needs to be added to bibliographies produced by 31 of the 67 countries (46%).

- Price information of the national bibliography itself needs to be added in about 65% or 44 of the countries.

- Copyright information needs to be added to 30 countries (44%).

(It should be noted that a copy of a current Georgia national bibliography was not located so it could not be checked regarding these elements.)

In summary, the Philippines, Pakistan, Papua New Guinea, Indonesia, Japan, Botswana, Nigeria, and Turkey supply all or lack only one piece of information requested in this Recommendation. One of the most common elements missing is the ISSN. Information about availability, copyright, and price for the national bibliography also are missing in many cases. The Standing Committee could encourage inclusion of such data.

INTRODUCTION OR USER-GUIDE (ICNBS Recommendation 9)

The introduction and user-guide are essential to users of a national bibliography regardless of the format. Coverage notes including exceptions, basis of records and legal deposit information, frequency, arrangement, rules followed, terms used, script conversion schemes (if used), classification outlines, systems requirements (if used) should all be covered in the bibliography's introduction.

Most national bibliographies have an adequate introduction with many, but hardly ever all, of these elements. Namibia and Nigeria have excellent introductions as have Papua New Guinea, Philippines, Japan, Korea, Kenya, South Africa, Zambia, and Zimbabwe.

Elements found lacking most frequency in the introduction were list of special terms used, definitions, and abbreviations (21%), and description of filing system (49%).

A few countries (15%) had no introduction in the issues examined. The Standing Committee on Bibliography should encourage these countries to add one and all others to add the elements currently missing from their introductions.

ARRANGEMENT OF NATIONAL BIBLIOGRAPHY (ICNBS Recommendation 10)

This recommendation states that bibliographic records should be based on international standards and arranged in an appropriate manner with adequate access (indexing or searching) points.

The majority of countries (over 60%) in these geographic areas use Dewey Decimal Classification (DDC) for the arrangement of the national bibliography. Six (9%) countries use the Universal Decimal Classification (UDC) system. The Library of Congress classification system (LCC) or its Subject Headings (LCSH) are used by a few. The rest are arranged by classification numbers according to their national system with many similar to the DDC, by broad subject headings, by accession numbers, or alphabetically with no classification.

As for cataloguing standards, most countries use ISBD or AACR2, but sometimes not the latest edition.

Indexing is adequate in most national bibliographies -- except for Hong Kong and Mongolia which have no indexes. The CD-ROMs that were checked have good access points. It is possible to search Namibia's Web-based database. It would be helpful if Thailand's national bibliography were enhanced with an annual index, and if Vietnam's included monthly indexes (in each issue) in addition to its annual index. A particular strength of national bibliographies produced in Central Asia and Transcaucasia is provision of access points. This feature has been inherited from the former USSR system. Most have three or more indexes.

In summary, arrangement of the national bibliography is mainly by international standards, with a few exceptions. It is these exceptions (4-6 countries) with no subject arrangement that should be encouraged to adopt an internationally acceptable system. The ISBDs and AACR2 are used by most countries. Those bibliographies not having indexes should be encouraged to add them.

INTERNATIONAL STANDARDS USED (ICNBS Recommendation 11)

The National Bibliographic Agencies have the responsibility for preparing comprehensive bibliographic records for the national imprint and should adopt international standards and principles for cataloguing, ISBN, ISSN, classification schemes, metadata and permanent naming of digital objects.

In the majority of cases, the national library publishes the national bibliography -- exceptions being countries such as Lesotho where there is a substitute national bibliography. It is heartening to know that the Jordan National Library is now publishing the Jordanian National Bibliography; until recently it was published by the Library Association. The national bibliography in Palestine is published by the Arab Studies Society. Swaziland's national bibliography is published by the University, but in consultation with the National Library. In Central Asia, four of the five national bibliographies are published by the book chamber, which follows the former USSR structure. Mongolia's national bibliography is published by the Academy of Sciences Publishing House. The three national bibliographies in Transcaucasia are published by national book chambers. It may be that Azerbaijan's 1993 legal deposit law changes this responsibility; at present their book chamber is closed. Brunei has no designated national bibliographic agency, so libraries in Brunei are sharing bibliographic functions. Brunei Museum Library is responsible for compiling the new "substitute" national bibliography that lists titles in that library for the time period covered.

Authority control is the responsibility of the NBA. This is not mentioned in the introduction of many national bibliographies. In looking at entries in the national bibliography, it appears that there is authority control but this needs closer study. For instance, Namibia doesn't mention authority control but it is known that the National Library has started an authority file; this may be the case for other countries. (In this workshop, we will hear from South Africa more on this topic.) It becomes painfully obvious if countries do not have authority guidelines to follow, and it would be useful if countries would make mention of the authority rules they follow.

The Bibliography Section's Standing Committee should recommend and encourage NBAs to adopt ISBNs and ISSNs for their publishers/ publications where the systems are not now used. Countries not using one or both were surprisingly high in these areas, approaching 75% of those with national bibliographies.

Metadata and permanent naming of digital objects are not used by the national bibliographies that were studied. It may be too soon to see results in these areas yet.

It will be interesting to watch developments regarding automation and Internet capabilities. As witnessed by the response from Mongolia, as of June 2001, they are connected to the Internet as the result of a grant from the Soros Foundation. They also mention plans to work on the "Registration and Information database on National Bibliographies of Mongolia."

Next steps

In summary, the authors are presenting their findings and suggestions to the Standing Committee on Bibliography. Members of this group will determine how and what they can do and with whom they need to work to improve the national bibliographic scene and the universal bibliographic control.

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Perspective on names in the *South African National Bibliography*: Past, present and future

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1 Introduction

Cyberspace – defined as a digital world, constructed by computer networks – is fast becoming part of our reality. We live in a global environment, with fluid frontiers, where data warehouses, information and misinformation and knowledge in digital form abound. The shift from the Information Age to the Knowledge Age is taking place almost imperceptibly.

Our society – how we work, live and play – has changed and we need information to redefine society for the Knowledge Age. As librarians, we know better than most that vast amounts of information are of little or no value to our users, unless we can find exactly what they need, quickly, and easily and in a usable format, capable of being organised and stored for later use.

People who survive and thrive in the Knowledge Age will be knowledgeable. They will develop their abilities as knowledgeable learners. They will have an ability with knowledge. They will be skilled in the combination of knowledge to create new ideas, to innovate, to invent. According to Derek Cabrera, in his book *Remedial genius*, such people have mastered the art of thinking in patterns, relationships, systems, distinctions and perspectives. The National Library of South Africa (National Library) is another knowledgeable citizen of cyberspace.

2 National Library in perspective

2.1 History

Until 1 November 1999, for historical reasons, South Africa had two national libraries, the South

African Library, founded in 1818, in Cape Town, and the State Library, founded in 1887, in Pretoria. In terms of South African legal deposit legislation, each of the national libraries was a legal deposit library, entitled to receive from the publishers a gratis copy of every book, serial, newspaper, government publication, or other printed item published in South Africa. In South Africa, legal deposit in some form or another, dates back to 1842. As a result, extensive collections of material of great scholarly value have been built up in the former national libraries.

During the 1990s the Department of Arts, Culture, Science and Technology began a review of all legislation under its jurisdiction, including the National Libraries Act, No 56 of 1985. The Minister of Arts, Culture, Science and Technology in 1996 appointed a Working Group on the national libraries of South Africa to advise him on the future of the two national libraries. The most important recommendation of the Working Group was that the two national libraries be amalgamated to form a dual-site (Cape Town and Pretoria) national library, to be known as the National Library of South Africa.

The new institution, formed on 1 November 1999, makes possible a renaissance of the national library in South Africa. Within the framework of its mission, it should be faithful to its strategic directions – i.e. holding a mirror to the nation, building a bridge to the information society, levelling the playing field for information access, and creating a learning organisation - to play a meaningful role in its rapidly changing environment.

2.2 Objects and functions

The National Library is best characterised by its objectives, as described in *The National Library Act, Act 92 of 1998.* The mission of the National Library is to contribute to socio-economic, cultural, educational, scientific, and innovative development by collecting, recording, preserving, and making available the national documentary heritage and promoting an awareness and appreciation thereof, by fostering information literacy, and by facilitating access to the world's information resources.

Important functions of the National Library with an impact on authority control are to build up a complete collection of published documents emanating from or relating to South Africa and to record these documents. It should render a national bibliographic service and in such way promote optimal access to South African published documents, nationally and internationally. It should also act as the national bibliographic agency (NBA) of the country. In order to achieve its objects and promote the development of library and information services in South Africa, the National Library must provide appropriate information products and services and provide leadership, guidance, and advice to South African libraries and information services. These functions are in accordance with the International Conference on National Bibliographic Services (ICNBS) and support national bibliographic control.

The primary knowledge resource of the National Library is built up from documents received in terms of *The Legal Deposit Act, no. 54 of 1997.* The collection reflects the cultural heritage and identity of the South African nation in its rich diversity. The National Library not only sees to it that these publications are preserved for posterity. Access to the information they contain is another prime concern. Using the information supplied by the publishers together with the publications lodged on legal deposit, the National Library compiles the *South African National Bibliography*, or *SANB* as it is popularly known. The *SANB* has evolved from printed to electronic format and is an important South African information source.

Together with collecting and recording, a third group of activities to foster bibliographic control concerns the NBA activities. Authority control in South Africa complies with the universal bibliographic control (UBC) principle that each NBA should establish the authoritative form of name for its country's authors, both personal and corporate. It is also recommended by the ICNBS in its stipulation that each NBA should maintain an authority control system for national names, personal and corporate, and uniform titles, in accordance with international guidelines. Such an authority control system is of relevance in the compilation of a national bibliography, because names, titles, and subjects are also identified as the organising elements in the data requirements for the basic national bibliographic record.

Through these infra structural activities, the National Library plays a dynamic role in building an informed South African nation.

3 Authority control in South Africa

As a consequence of the bibliographic process, information sources in the National Library's collection of heritage documents are described and listed systematically in the *SANB*. This process involves the description of the physical item and choice of access points, using authorised forms for these access points. Authority control ensures that a standardised, unique name for a specific author is established, so that this standardised name is consistently used to accurately and precisely retrieve all works by an author in a particular catalogue. Since globalization became part of the National Library's reality during the 1990s, "catalogue" no longer refers only to the local, or in-house catalogue. It now has an international character, and a South African person is no longer consistently identified by a unique, standardised name. The National Library is a newcomer to the international authority control scene and is in a transition period from creator of a consistent local authority file to contributor of South African name authority records to an international authority file. The National Library aims for consistent use of South African personal names in both the local and international authority files, to be reflected as such in the *SANB*.

The National Library has achieved full authority control for personal names on local level. It still has a way to go before authority control is achieved on national and international level, to fulfill the goal of UBC, namely a "worldwide system for the control and exchange of bibliographic information, in order to make universally and promptly available, in a form which is internationally acceptable, bibliographic information on publications issued in all countries."

The South African perspective on personal name authority control is analysed in this paper with reference to content and context at local, national and international level.

3.1 Local level – National Library

3.1.1 Overview

In the early years, the former State Library maintained name authorities on the Dobis/Libis system. This list of headings contained, in addition to the authorised forms of headings, only the non-authorised and related forms and limited notes – occasionally referring to sources. Notably lacking were notes on the sources consulted to create the record and the nationality of the authors. During the early 1990s, this situation changed, as notes on the sources consulted and the nationality of the authors were added.

Gradually the national name authority list became the National Name Authority File (NNAF).
An integrated system of authority and bibliographic files was kept. The NNAF was a closed file, where authorised headings for personal and corporate names, uniform, and series titles, and subjects were kept in one authority file. Depending on the search strategy, the relevant data was extracted. (NB: in this paper, the authority data for personal names are used to illustrate authority control matters, and is not an indication that only a name authority file is kept).

The NNAF file is a standardised list of names and biographical details of South African authors. Information supplied by authors is utilised by authority control staff to uniquely identify a name on the NNAF. Information is obtained from authors by means of a form that they complete, sign, and send back to the National Library, and that includes the following:

☐ surname
☐ full forenames
☐ maiden name, if applicable
☐ pseudonym, if any
☐ real name, if pseudonym is used, and an indication of the confidentiality thereof
☐ date of birth
☐ signature
☐ date the form was completed
☐ list of works published, and their publication dates.

All new authors receive such a form. The form has been used since 1971.

Qualified librarians perform specific authority control activities, viz.:

☐ establish names according to AACR2R (chapters 22-24)
☐ consult/research the author's works and other sources, using the author's from, *Library of Congress Name Authority File (LCNAF)*, *British Library Name Authority List (BLNAL)*, *SACat* (the South African cooperative database), *Library of Congress Rule Interpretations (LCRI)*, and consultation with experts
☐ make references according to AACR2R (chapter 26) and add notes
☐ mail forms to authors, where necessary
☐ create and update names according to information supplied by authors
☐ handle enquiries regarding South African authors.

Thus, it is clear that authority control staff are knowledgeable on South African authors, because they can see what others cannot, as they have access to the legal deposit copies of an author's repertoire. They can do what others cannot, because the National Library as the NBA in the country, has the authority to establish the standardised forms of names for South African authors, to the benefit of any other institution. They are able to be what others are not, because they are empowered by legislation to perform South African authority control, resulting in capacity building. They are in a state of "re" (reflection and reporting), or constant learning, which is dynamic and powerful.

3.1.2 Principles

Three sets of principles are basic to the authority work done at the National Library, namely: the library catalogue as bibliographic control tool, the availability of a single name for a given author to foster consistent usage, and precise retrieval of information searched for by a user.

(a) The library catalogue and authority control

The National Library acknowledges that the concept of "authority control" is inseparable from that of "catalogue" and predates the existence of name authority files. The library catalogue is a well-known bibliographic control tool, and its creation involves the description of the physical item and choice of access points. The establishment of the authority forms of these standardised access points supports the finding, collation and linking functions of a catalogue. Without standardised name headings which are consistently used, it will be difficult to find a work by a specific author, as well as to know what the extent is of a specific author's works – authority control thus provides for the connection of the various elements in a catalogue. Through authority control, standardised name headings are created for utilisation within a (library) catalogue.

(b) Uniqueness, standardisation and linkage

Authority work involves research and intellectual effort to determine the authoritative form of a South African heading. In addition, references and relationships are traced, notes are included, and reference sources are cited. Authority work results in an authority record, which is a record of the decisions made during the course of the work. For South African authority records, the elements in the authority file correspond to those listed in *Guidelines for Authority Records and References*: authorised heading, including dates and other additions to qualify; variant forms (see references); related forms (see also references); public notes; private notes (e.g. some authors writing under pseudonyms wish to keep their real names confidential); and sources cited. The present cataloguing system used by the National Library does not provide for an authority record number, nor the International Standard Authority Data Number (ISADN), but the National Library is in principle in favour of the ISADN.

Name authority records are included in the South African NNAF. The NNAF is a set of records that identifies the established, authoritative forms of headings in South African bibliographic records. It is an instrument in precise information retrieval. Although South African name authority control cannot yet be promoted through the availability of authority files to the national and international library community, standardised South African name headings are available in *SANB* bibliographic records. When libraries use these standardised forms, the consistent use of one authority form for a heading is ensured, and authority control is promoted.

(c) Quality searching

The location of specific publications is facilitated by the National Library's authority work. By using a single, unique authority heading on the NNAF, the user is assisted in precise retrieval of desired information. Duplication is also avoided, which is another advantage. However, this situation now needs to be revisited in the national and international context, with greater emphasis on international usage in respect of authority control.

3.1.3 Standards and guidelines

The principles of Universal Bibliographic Control and International MARC (UBCIM) state that authority control should be done according to international standards and guidelines. Authority control staff at the National Library utilise relevant standards and guidelines to ensure that every entry that is selected as an access point for the catalogue (*SANB*) is *unique and does not conflict with any other entry that is already in the catalogue or may be included at a later date.* While various bibliographic tools are used, including various UBCIM and LC sources, the Anglo-American Cataloguing Rules 2nd rev. ed. (AACR2R) is discussed below with specific reference to its use by the National Library.

AACR2R is the basic tool for consistent establishment and maintenance of name headings in the *SANB*. Chapters 22, 23, 24 and 26 are the basis for the formulation of name headings. In addition, the National Library applies optional AACR2 rules 22.17A and 22.18 in the establishment of personal names. These deal with an additional date and fuller names as qualifiers to name headings. It is also worth mentioning that AACR2R 22.5D1 deals specifically with prefixed Afrikaans surnames such as de Klerk, du Toit, le Roux, van der Walt, van Heerden, von Wielligh.

The reasons for applying the optional AACR2R 22.17A and 22.18 are twofold: Firstly, an author is uniquely and undoubtedly identified as a specific person, not to be confused with another. And, secondly, the authority controller has available at that specific point in time distinctive information regarding the author to be included in the authority record. This prevents the necessity of revisiting the same information at a later stage, should it become evident that qualifying information is needed to distinguish between persons with nearly identical names. The application of these optional rules presently hampers South African participation at international level

The AACR2R-based process of establishment entails the following: The title page serves as the chief source of information. The choice of name is the most frequent name that the author uses. This name – which could be a pseudonym, surname and initials, or a surname and full forenames – is determined according to the name that appears most frequently on the title pages of his/her works. Authority control staff are in a very good position to determine this, because the National Library is also the legal deposit library compiling the national bibliography of the country. If only initials are printed in conjunction with the surname, the full names are given. If initials are used partly, *SANB* gives the full forenames whenever this information is available, and not just where a conflict exists (the AACR2R option is applied). The National Library adds dates to names whenever these are available, and not only to qualify a name in order to resolve conflict. Explanatory notes are added, and sources are cited. Applicable references are made.

Certain authority control problems identified at international level – i.a. change of name, variations in appearance of names on chief sources, the same name for various, or different, personal authors - are also experienced by the National Library. These problems have serious implications for accessing and retrieving precise information in South African cooperative catalogues.

3.1.4 Other verifying sources

These include author forms (see par. 3.1.1), biographical dictionaries, encyclopaedias, the Internet, countries' name authority files, bibliographies, and bibliographic databases.

3.2 National level – South African libraries and SABINET Online

The NNAF is available as a file in-house to the National Library. Headings for authoritative South African forms are nationally and internationally available in electronic *SANB* records as they appear on the separate *SANB* database, and the cooperative *SACat* database on the SABINET Online system. Headings are also included in the printed *SANB*.

The South African authority control scene presently seems to be fragmented and needs to accomplish greater uniformity regarding standardised forms of names. Although the National Library is the NBA of South Africa, the *SANB* is compiled with South Africa's legal deposit publications as core, and an NNAF is maintained with reliable authority records created according to international guidelines and standards, the National Library lacks a generally available and compatible authority file which librarians can access to retrieve the complete authority record for utilisation in their local authority files. Reasons for its unavailability are the following:

- absence of an authority record format in SAMARC, used by the South African libraries until the late 1990s
- the existing NNAF vests in the Dobis system, currently incompatible with other systems
- conversion programmes need to be in place to translate authority data in D(obis)-MARC into SAMARC and /or MARC 21 – D-MARC deviates slightly from SAMARC
- limited financial and human resources at the National Library has delayed the production of South African bibliographic and authority data negatively.

Furthermore, the National Library does not have a nationally agreed policy to control the form of names according to applicable standards and principles. A national authority control policy for South Africa should be developed, as well as training for all South African staff involved in authority work.

Authority controllers are supported by training manuals and guidelines, but no coordinated training at national level takes place. Not much attention is given to authority control as a topic in the undergraduate curriculum, and not all authority controllers operate on the same level of experience. This leads to simple errors such as spelling mistakes and to serious misinterpretations of AACR2R.

South African librarians consult AACR2R, but do not always interpret the rules consistently. While the title serves as chief source of information, in some instances the name is accepted in the form in which it appears on the first received publication. Where the same name for different authors appear, either dates or full forenames will be used as qualifiers. In other cases, neither dates nor full forenames will be used while sometimes the full forenames will be added if they are generally known. In other instances, the name will be standardised according to surname and initials, without full forenames and/or dates. Regarding variant names, research is only undertaken once a variation of the name appears.

Most South African librarians verify their authority records, but verification is done at different levels: from cataloguers in training, to very difficult personal names and all corporate names, to authority control working groups and regular authority control audits.

South African authority forms are researched by the NBA, a costly and time-consuming activity. However, many authority controllers research a name authority form for a second time, instead of making efficient use of the research already done by the National Library.

But, a decision to adopt MARC 21 in 1997 significantly affected the direction of bibliographic control in South Africa. A MAchine-Readable Cataloging (MARC) seminar, "A future MARC format for Southern African libraries" was held in Pretoria. Participants listed 23 reasons why another MARC format should be considered for the South African circumstances. One reason deals with authority files:

> ☐ Problems encountered with authority files and quality control in South Africa: " ... In a letter to the chairperson of the South African Institute for Library and Information Science's (SAILIS) Committee for Bibliographic Control, problems concerning the lack of a local format for authority records was mentioned. It was indicated that most local-based SAMARC computer systems do provide for authority records. The authority records, however, do not comply with all MARC format requirements with regard to the exchange of information. A USMARC authority format as well as a UNIMARC/Authorities does exist."

The outcome of this seminar was a vote by the library and information sector in favour of USMARC, now MARC 21. Gradually, South African libraries changed from SAMARC to MARC 21, led by the consortia libraries in the tertiary sector and followed by SABINET Online, a commercial company acting, among others, as a bibliographic utility for South African resource sharing, as OCLC does world-wide. Although a large number of South African libraries still operate on SAMARC-based systems, they are gradually being replaced by Innopac Interfaces Inc., Aleph, InMagic/DB/Text and other MARC 21 systems. Most of the consortia – GAELIC, CALICO, FRELICO – and SABINET Online have completed their conversion processes. In order to adapt to the changing library environment, the authority control staff of certain institutions underwent training in view of becoming NACO independent members, to enable South Africa to submit reliable South African authority forms to the *LCNAF*.

To facilitate resource-sharing activities – " ... Cost-effective cooperation requires the use of a common exchange format to support common understanding and processing of the records received." – and because of the impact of Universal Bibliographic Control – " ... each country should be responsible for recording its own national imprints, producing bibliographic records in a standardised computer format so that they can be exchanged with those of other countries" – which was also given as a reason at the Seminar to move over to ARC 21, SABINET Online signed a contract with OCLC. In turn, South African libraries, including the National Library, signed a resource-sharing contract with SABINET Online. Original cataloguing of the country's imprints are now possible on an international level (*WorldCat*), and bibliographic records could be exported to individual libraries internationally,

nationally and locally. Through Passport-for-Windows (PfW), reliable South African authority records, either newly created or updated, are contributed to *LCNAF* (also available on OCLC's *WorldCat* database) and provide accurate and consistent headings to be used in bibliographic records by any cataloguer world-wide.

However, it is at this point that a conflict in relation with authority records arises. A good mixture of authority records originated in the *SANB NNAF, LCNAF,* and libraries' local authority files will be found in *SACat*'s authority files. The reason for this is that South African authority records, although established according to international standards and principles, were created for different catalogues: *WorldCat, SACat* and *SANB*. Up to 1997 and even beyond, *SANB* is a widely consulted source by South African libraries for authoritative headings in bibliographic records, as Snyman proved in her 1999 thesis on standardised South African names in bibliographic databases. Even the consortia are not in agreement with each other about giving preference to the *LCNAF* form when a conflict arises with the *SANB* form of name. Although the authority control policy of the most influential consortium was recently adjusted to give preference to the *LCNAF* form where conflict arises, others are not convinced that the *LCNAF* forms for South African names are always accurately established and would prefer to use the *SANB* forms in such cases. Nor is it an easy task to adjust existing South African authors in *LCNAF*, because:

- in the past, South African librarians had to convince American librarians of the common use of a South African name, of which they were unaware
- once an authority record is coded "AACR2" or "AACR2 compatible" it cannot be completed up to the level needed for the South African circumstances (e. g., addition of dates and other qualifiers), and can only be changed when a documented error is detected in the authority record, or when the addition is specified in the rules.

The result of these limitations is that less complete South African authority records are distributed world-wide to individual library catalogues via the *LCNAF* at a time when more complete information is available in the *SANB NNAF*. Furthermore, duplicate forms of the same South African name are available world-wide, as the printed and electronic *SANB* records containing the more complete names are distributed internationally and thus the consistent use of only one form of name in all catalogues is prevented. It is therefore vital that opportunities should be investigated to improve the consistent use of a single form of name.

One such opportunity to be seized to reduce conflict would be the development of staff conversant with MARC 21 (1999), OCLC's Passport-for-Windows (1999) and NACO procedures (2000). The National Library's authority control staff have had NACO training, became independent in June 2001 for submitting accurate South African authority records to *LCNAF* , and contribute in this way to the depth of a bibliographic control tool used world-wide. Through participation on international level, South Africa can contribute and distribute its authority records from the highest level to national level, ending in a local/in-house library catalogue.

3.3 International level – International Federation of Library Associations and Institutions (IFLA) and its UBCIM core program

The National Library functions within the context of international principles and national legislation, the latter already being dealt with.

(a) UBCIM, NBA and the responsibility for national authors

The National Library derives its authority on national bibliographic control activities, of which authority control is one, from the ICNBS, a conference of UBCIM, the latter being a core programme of IFLA. The ICNBS stated that the following three components form the basis for adequate national bibliographic control:

- legal deposit
- national bibliography
- NBA.

The activities relating to these components are mostly carried out by national bibliographic agencies, which are in the majority of cases the national libraries of countries. Such is the case in South Africa.

With respect to authority control, the National Library as NBA applies ICNBS recommendations to the South African context. The National Library supports therefore the comment and recommendation of Françoise Bourdon who stated:

> "Given that the national bibliographic agencies have the responsibility for establishing the authority records for their national authors, it would be to their advantage, when establishing records for foreign authors, to use the records in the authority file created by the appropriate bibliographic agency, where this exists. It is therefore the question of cooperation between authority files run by the national bibliographic agency which is under consideration here."

Her conclusion is that whenever a NBA has to include a foreign author in its national bibliography it should take the authority heading established by the appropriate NBA into consideration.

However, the IFLA UBCIM Working Group on Minimal Level Authority Records (MLAR) and ISADN also recommend:

> "While this Working Group was created under the auspices of UBCIM, we have come to realize that the IFLA goal of UBC by way of requiring everyone to use the same form for headings globally is not practical. There are reasons to use the form of names familiar to our own users, in scripts they can read and in forms they most likely would look for in their library catalogue or national bibliography. Therefore, this Working Group recognizes the importance of allowing the preservation of national or rule-based differences in authorized forms for headings to be used in national bibliographies and library catalogues that best meet the language and cultural needs of the particular institution's users."

The National Library acknowledges that an authority heading may not always be reusable at international level in the given form, takes note of ongoing work by the Working Group on MLAR and ISADN, FRANAR and has followed discussions on possible models for authority control. Nevertheless, it would be in favour of solutions that promote the principle of consistent use of authorities as established by NBAs for their national authors on international level.

Secondly, the National Library has at its disposal reliable reference authority data for its national authors and would prefer to be the central source for supplying the applicable and correct information to a foreign library, that needs to establish an authority record for a South African author. This would obviate repeated research and the risk of an erroneous authority record.

Thirdly, channels for the distribution/availability of reliable South African authority records already exist in the form of headings in *SANB* bibliographic records. Expansion is now possible because the National Library's authority control staff have gained their NACO independence and South African authority records are directly contributed to the *LCNAF*. Once converted successfully to the MARC 21 based-Innopac Millennium system, authority data will be available on the National Library's web site. The National Library is also strongly in favour of the proposals of the Working Group on MLAR:

> "To facilitate international sharing of authority data, we propose that each NBA makes its authority files available over the Internet within two or three years, using the IFLA home page

to register current information about what is available and what restrictions are in force. Such a system would permit multi-file searching to be conducted across a range of authority files or a single national authority file as desired. Within this context, retrieval would be greatly enhanced by the use of some numbering mechanism to link the associated authority records created by the various agencies, either the local system record numbers or an ISADN for the entity, as was suggested by IFLA in the 1970s.

"We further propose that access to the shared authority files would be 'Read Only'. Searching and retrieval would be on a Read-Only basis. We propose that access to files for consultation or downloading (copy/paste, etc.) should prohibit editing of any part of the original record by others than the home NBA. Any arrangement for cooperative record maintenance would be by separate agreement between cooperating institutions, and is a matter quite outside this report. This is both a practical approach to file maintenance and ensures that authority for editing data is retained by the NBA, which can be expected to have the most expertise in the local format, cataloguing code, and user expectations."

3.4 Interaction between content and context

Reflecting on personal name authority control, it is worth mentioning that over a period of time, interaction between the content of the South African authority record and the context within which it should foster control has become evident. A change in one necessitates adjustment of the other. Since the former State Library's original inclusion in the IFLA International Office for UBC's *A survey of authority files and authority control systems for catalogue headings* (December 1977), the National Library's authority control staff have gained their NACO independent status for personal name authority control. The National Library is now in a position to submit reliable South African personal name authority records to the *LCNAF* – one of a few international resources. The benefit of immediate availability of reliable South African name authority records in an international context implies the discontinuation of the SAMARC format of the 1970s – which was indeed replaced by MARC 21 in 1999. The National Library's in-house Dobis-Libis system which also dates from the 1970s, is currently being replaced by the MARC 21-based *Innopac Millennium* system.

On the other hand, serious limitations regarding the content of South African name authority records prevail. As mentioned above, additions in the form of dates to uniquely identify a South African person are now excluded in the established name authority form if a record for this person is already available in the *LCNAF*. However, as the case is with other national bibliographic agencies, the LC is willing to accommodate the *SANB* form of name in a field in the name authority record, equivalent to the field for the main entry for this particular personal author.

A second limitation arises from the fact that the South African NBA, which has more publications available from which to establish the authoritative name for a South African author, may therefore use different rules from those used by another cataloguing institution with fewer publications at its disposal, resulting in different forms of name for a specific author. Both these limitations regarding content of South African name authority headings create hindrances in the consistent use of a single name for a specific author.

4 Rethinking access control

The purpose of authority control is to establish a single, standardised form of name, whereby an author is uniquely identified, and his/her works are precisely accessible/retrievable. As indicated above, the National Library should perhaps investigate the possibilities of "access control" as opposed to "authority control". The concept of access control is internationally under discussion, because authority records are shared in the international community, and the use of a single form for an author conflicts with the principle of trying to provide cataloguing records that serve the needs of the library user – that is, providing bibliographic information in the language of the patrons and following the conventions of that language as used in that country or community.

An access record is defined as the next generation of the authority record and can be viewed as a "super authority record". Access control records would be linked both to bibliographic records to collate all manifestations of a work, and to other related access control records to collate related works. One of the key concepts is removing both the label and the notion of "authority". The access control record has evolved from the current authority record and links the variant forms of a name without declaring anyone as the "authorised" form. A central concept is that a library or user should be allowed to choose a preferred form of name or to have displayed a default heading, especially in the case of every national-level access control record. This concept is radical and contradicts the second part of AACR2, which is devoted to rules for how to construct authorised forms of names and titles. This new approach would impact on the local online system design and indexing, and it would require the most substantive development work.

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Transforming the Swaziland National Bibliography (SNB): Visions of Currency, Access, Coverage and Quality

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Abstract:

The presentation explores the evolution of the SNB, noting its roots in (i) international resolutions on national bibliographies, and (ii) legislation bestowing legal depository status on the University of Swaziland Libraries (UNISWA) and the Swaziland National Library Service (SNLS). It is observed that since publication of the first issue in 1977, currency, accessibility, coverage and quality are recurring challenges while the strain on the thinly spread human resources continues to pose a threat to SNB production.

It is argued that in recent times, partnerships within the Swaziland information system and with printers and stakeholders, sustained publicity, applied research, responsive administrative systems and routines, dedicated funding, and other technical and human interventions have gradually produced modest improvements. It is further noted that there is still room for the SNB to improve itself. The presentation concludes that the key to excellence lies in, inter alia, comprehensive and programmed implementation of international recommendations; intensification of interest in grey literature in all its formats; continuous development of the SNB into a refined Web portal to Swaziland's published heritage; and, a complementary Swaziland thesaurus sensitive to the content of Swazi culture, traditions and lexicon.

Background

The precursors of the current Swaziland National Bibliography (SNB) include the compilations by

Wallace[1], Webster and Mohome[2], Arnheim[3] and Nkabinde[4]. It was only in 1977 that the first issue of the title *Swaziland National Bibliography*[5] was published by the University of Swaziland Libraries (UNISWA). The stated objective ever since is to issue the SNB annually. Five factors account for the evolution of the SNB from the early and humble beginnings of the late 1960s to its present state, namely:

- The professional and cultural convictions, coupled with the sterling efforts of interested pioneer library and information experts, to trace, make available for consultation and preserve a standard record of the published heritage of Swaziland, partly gave impetus to the official launch in 1977.

- The resolutions of the International Congress on National Bibliographies, Paris, 1977, subsequently reinforced at regional level by the Gauteng Declaration of the Seminar on Accessing Information Resources in Southern Africa: National and Subregional Bibliographic Control, Johannesburg, 1996[6], and further affirmed by the International Conference on National Bibliographic Services, Copenhagen, 1998, collectively provide the backdrop for the initiatives surrounding the production and continuing evolutionary development of the SNB.

- The Books and Newspapers Act, no. 20 of 1963, the Archives Act, no. 5 of 1971 and the King's-Order-in-Council, no. 3 of 1978 bestowed legal depository status on the Registrar - General's office (up to 1978), the Swaziland National Archives (SNA), and the Swaziland National Library Service (SNLS) and UNISWA, respectively. With the 1978 order and designation of UNISWA as ISBN Agency, and despite lack of clarity regarding SNB production responsibility and other omissions, these statutes provide the legal framework making it possible to acquire and establish bibliographic control over Swaziland's published heritage. As ISBN Agency, UNISWA has the advantage of having an idea of what is formally being published and then tracking it on behalf of the national depository programme as a whole.

- A sense of dissatisfaction with an unenviable record of failure to issue the SNB in a timely manner, especially the editions for1978-1982, 1983-1985, 1986-1987 and 1988-1993 which were delayed by five years, one year, two years, and six years respectively, elicited responses for a production turn around.

- The interest expressed by subscribers, as shown by a considerable and persistent number of claims for delayed issues that inundated UNISWA, precipitated decisions cumulatively giving the SNB a new lease of life.

Initiatives and lessons

Swaziland does not have an official National Bibliographic Agency (NBA). With the publication of the first issue in 1977, UNISWA assumed and continues to play the role of a quasi - NBA. Among other things, the absence of clear NBA structures accounts for the currency, access, coverage and quality problems that have characterised the SNB. Nonetheless, a modicum of progress in addressing these issues has been realised over the years, though there is still considerable room for improvements. The improvements to date are attributable to the following:

Partnerships

Following earlier cooperative efforts among UNISWA staff, a joint committee (JC) of UNISWA and SNLS was formed in 1993. The JC produced the 1988-1993 issue which, surprisingly, experienced the worst release delay of six years. The difficulties of the JC included:

(a) High staff turnover and lack of continuity in the cooperating institutions.

(b) Apparent entanglement of the SNB with the Swaziland Union Catalogue initiative.

(c) Inadequate cataloguing and classification skills among participants created enormous editing work.

(d) Uneven spread of information technology (IT) (i.e., CDS/ISIS) skills.

The delay in the issuing of the 1988-1993 SNB issue suggests that cooperation, as a possible solution to national bibliographic control problems, may perhaps only be situational. In Swaziland's experience, cooperation should start with standards adoption and technical capacity building. It is with regard to the later that under the auspices of the Swaziland Library Association (SWALA) and in cooperation with UNISWA and SNLS, major cataloguing and classification workshops were run in 1995, 2000 and 2001. Simultaneously, broader partnerships outside the confines of institutions responsible for national bibliographic control are important. As part of the redefinition of cooperation, UNISWA is currently seeking to closely network with grey literature, electronic and audiovisual media producers to help attain comprehensive coverage in the SNB.

When the 1988-1993 SNB was released, quality was, in the interim, sacrificed in favour of currency, access and coverage. It was imperative to redefine production line responsibility to give enough time to build sufficient technical capacity within the Swaziland national bibliographic control system.

Streamlining

The lessons from the JC initiative provided the *raison d' tre* for the streamlining and redefinition of the nature of cooperation and collaboration, with production responsibility reverting to UNISWA. The key elements characterizing the rearrangement are:

(a) Continued cooperation in sharing of information about publications.

(b) At UNISWA, SNB production is a key result area included in the strategic plan 1999/2000 - 2004/2005, and therefore attracts an annual budget allocation. Among other things, the objective of UNISWA as defined in the plan is "*to* consolidate and maintain the national bibliographic control programme through *regular compilation and publication of bibliographies and indexes in order to attain comprehensiveness, currency and accuracy in the recording, preservation and promotion of the national history.*"[7]

(c) Publicity - All ISBN allocation correspondence conclude by underscoring the need to pay homage (by depositing publications to which ISBNs are assigned) to Swaziland's published heritage. This helps to keep the SNB "fire burning".

(d) Broadening partnerships - After a few trials, UNISWA has identified, for the time being, a reliable printer with ability to deliver incremental quality on time.

Research

To effectively deal with issues affecting the production of the SNB, it was apparent that an informed knowledge base was required. It is in this light that the article "Swaziland National Bibliography: the currency predicament", *International Cataloguing and Bibliographic Control*, 27 (1), 1998[8], was written. How did this study help in improving the SNB? Besides clarifying the nature of the problems that have historically retarded progress, it helped crystallize ideas on coverage. Because societies in developing nations like Swaziland have their strong cultures still deeply embedded in oral traditions, because the formal publishing sector is small and fragile, and unless a bold decision is taken to stretch the definition of ***published heritage***, the contents of the SNB would not be reflective of the totality of the country's historic, cultural, intellectual, social, economic, and political experiences. Thus, to attain comprehensive coverage, the SNB includes bibliographic records of undergraduate and graduate dissertations and theses, serials, articles and monographs, and grey literature in all its various formats, published in or outside Swaziland. Related studies are available and collectively, this research knowledge has significantly guided the technical and human interventions shaping the currency, access, coverage and quality thrust of the SNB.

Technical interventions

Consistent with the ideals of Universal Bibliographic Control (UBC), the cataloguing, classification and indexing of the SNB is, as much as possible, in accordance with international standards. Following a myriad of technical problems in the production of the 1988 - 1993 issue, focus is on:

- Continuous improvement in the application of Anglo-American Cataloguing Rules (AACR2) and Dewey Decimal Classification (DDC). Starting with the 1999 issue, Library of Congress Subject Headings (LCSH) are assigned to all entries. These applications have considerably aided description, arrangement and usability as well as broadening access points to the SNB.

- The use of CDS/ISIS up to 1998 after which UNISWA migrated to the UCS Library system (formerly URICA), word processing software and a Hewlett Packard laser jet printer. These IT applications came as a boon to data capture, editing, indexing, design and layout, and print quality, producing significant improvements in production turn around times, and therefore the present currency levels. During the course of the year, SNB records are downloaded from the UNISWA online public access catalog (OPAC) on an ongoing basis and converted, presently to Corel WordPerfect 8, for fine tuning to comply with SNB record formats. A camera ready laser jet printed compilation is produced for further refinement by professional printers.

In the difficult conditions under which the SNB is produced, the key information elements pertinent to item identification that are provided are author, title, subject headings, imprint, physical description and ISBN. With respect to grey literature which is not formally published and yet constitutes a significant proportion of content, SNB imposes imprint information, where feasible, to assist in the tracing of materials.

However, the immensely significant customs, cultural institutions and systems like umhlanga, incwala, lutsango and tinkundla, etc. which are unique to Swaziland's heritage and for which users have demonstrated an interest are, understandably, not specifically covered in LCSH terminology. Under LCSH controls, these subjects are accommodated under such general terms as *Manners and customs, Rites and ceremonies, Social life and customs, Festivals, Social institutions,* etc. To the extent that SNB subject indexing is not always specifically sensitive to the content of Swazi culture, traditions and lexicon, it can be argued that user needs are not optimally addressed. It is imperative to explore SiSwati subject terms for incorporation into schemes enjoying international usage.

Other weaknesses relate to the provision of general information in the use of the SNB publication. A few inquiries for materials cited in the SNB are erroneously directed to UNISWA, the SNB publisher, rather than the publishers of such materials. In the SNB print environment, a clear "how to" user guide is required. In the event of migrating to the electronic environment, the same guide, with some modifications, would apply. Either way, users require guidance in the interpretation and use of the following key items: (a) arrangement; (b) access points (author, title, series, subject headings, and indexes), imprint information especially for grey literature and what to do with it, etc. and (c) a comment on General Material Designation to accommodate the expanding nature of published heritage formats.

The projected enhancements will go a long way towards helping the SNB satisfy the broad range of needs that have emerged to date, namely:

- Inventorying of Swaziland's published heritage.
- Serving as a research tool for researchers, scholars, students, officials, etc.
- Providing an invaluable acquisitions tool for national, regional and international information service providers and consumers.

The Human factor

Improvements in the management of human relations have contributed to some of the few achievements in the SNB production and distribution processes. This has meant the involvement of everybody including the secretaries, paraprofessionals and professionals. The idea is to instill pride and a sense of ownership enough to motivate the pursuit of higher levels of achievement. Measures taken in this regard include:

- Creating space for secretaries to participate in data capture routines, initial indexing and formatting, ongoing updates of publisher lists, etc.
- Enabling paraprofessionals to pay visits to publishers to identify and acquire materials in terms of legislation.
- Networking with researchers, publishers and librarians to promote submission of publications and bibliographic records.
- Acknowledging staff contribution not only by word of mouth, but by immortalizing it by printing it in the SNB issues.
- Prompt response to inquiries, timely update and review of exchange and subscription lists, and expeditious preparation of cover letters and invoices to ensure distribution of SNB issues within at least a one week time frame from the date of receipt from the printers.

Challenges and Opportunities

The major challenges facing the SNB are:

- In the absence of a NBA, the ideals of currency, accessibility, coverage and quality are under threat from the strain on the thinly spread human resources.
- With some exchange partners and subscribers un-subscribing, a few are coming on board.

- Lack of clarity on measures to take in cases of non-compliance with deposit legislation; inadequate definition of the materials falling within the domain of published heritage; and presently, there are no legal provisions enabling the establishment of a NBA. In this regard, effective legislation for Swaziland should be a result of broad consultations among key information players, including the SNLS, UNISWA, SNA and others. In addition, the provisions of such legislation should be guided by trends in library and information services so that it can withstand the test of time. The later will assist in circumventing the need for and minimize any future amendments that may have to be piloted through the Ministry of Education, Cabinet, House of Senate and House of Assembly before Royal Assent.

By and large, the future perhaps lies in comprehensive implementation of the recommendations of the International Conference on National Bibliographic Services, Copenhagen, 1998. Meantime, the SNLS bill that has passed through Cabinet, should, if enacted, provide the foundation for a NBA to systematically address all matters of national bibliographic control and further articulation and production of a robust legal depository instrument. Basically, the bill proposes to consolidate and extend legal deposit status to SNLS, SNA and UNISWA. At regional level, the Southern African Bibliographic Control Committee (SABCC) as enshrined in the Gauteng Declaration of 1996, for which Swaziland is a member, has potential to serve as an important mentor for national and regional bibliographic control services in Southern Africa. Indeed, the 1996 Johannesburg seminar showed wide discrepancies in the levels of national bibliographic development and linguistic diversity among the 14 nations of the Southern African Development Community (SADC). However, the prospects for integrated regional bibliographic control services are real, provided a representative number of member bibliographies are produced, developed in conformity with international standards and superficial barriers bridged.

Assessment

SNB's achievements, so far, can only be modest, the highlights of which include:

- Previous issues up to 1987 comprised the main bibliography, numerous appendices capturing foreign books, dissertations and theses, articles and conference papers, legislation, law reports, research in progress and future publications, list of publishers and author/title index. The 1986-87 issue is annotated. From the 1988-93 issue, the format was simplified to include only the main bibliography capturing both local and foreign materials of all types relating to Swaziland, list of publishers, author/title index, and starting with the 1999 issue, subject index. This simplification collocates subject entries and eases usage of the SNB.

- With some sacrifices in other operational areas of library service, SNB has attained its stated currency objective, and a modicum of quality. Users, exchange partners and subscribers in SADC, Europe and USA have the benefit of current information on what is available on Swaziland.

- It costs an average of E1 170,00 to produce an average of 53 copies of the SNB and an average of only 13 subscriptions bring in approximately E1 209,00 per annum. Without getting into the implications of the continuing depreciation of the Lilangeni and the approximately six exchange agreements, it is arguable that the SNB is generally self sustaining.

- Current SNB entries are accessible on the general UNISWA Web OPAC at http://library.uniswa.sz. The consolidation of these entries to provide timely and easy access to a stand alone online SNB is under exploration.

Outlook

The foregoing suggests that there is still room for the SNB to excel in terms of currency, access, coverage and quality. To this end, the strategic thrust centres on:

- Cross-cutting implementation of the recommendations of the International Conference on National Bibliographic Services, Copenhagen, 1998 and the resolutions of the Seminar on Accessing Information Resources in Southern Africa ... Johannesburg, 1996.

- Development and consolidation of structures to control grey literature, both print and electronic, including accessing Swaziland's Outside Broadcasting videocassettes on Swaziland royalty, customs, traditions and culture.

- Consolidation of partnerships within the profession, with suppliers and other institutional stakeholders.

- Quality innovations including (a) upgrading of binding and usage of acid free paper to achieve hard copy product durability and (b) skills development in desktop publishing. UNISWA is in the process of identifying partners for the supply of acid free paper and other ancillaries, developing bindery facilities, and continues to explore working institutional links to help build and consolidate desktop publishing capacity.

- Compilation of subject terms unique to Swaziland and integrating them with internationally used thesauri such as LCSH.

- With a population of just under a million, a land area of 17 364 km^2, unlike many African nations, Swaziland has no ethnicity differences which makes name and subject authority controls easy. However, in the event of a regional bibliography and the idea of incorporating Swaziland subject terms into international thesauri taking shape, such authority work becomes even more pressing in view of the linguistic and cultural affinities of SADC societies.

- Production of an electronic version of the SNB for enhanced and broadened access, possibly starting with a CD-ROM edition in collaboration with partners such as the National Inquiry Services Centre (NISC), Grahamstown, South Africa. The projected scenario is that, for the foreseeable future, the print and electronic version may complement each other. The subscribers to the print version and exchange partners may possibly have free access to the electronic edition. Depending on how such developments unfold, it can only be anticipated that a workable compromise option may have to come from any subscription and access formula gaining ground in the electronic serials/journal environment. Ultimately, the consideration would be that the SNB, unlike other high profile national bibliographies, is seemingly and primarily more of a cultural symbol and therefore, financial returns, while sensible in terms of meeting production costs, are perhaps secondary.

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Co-operation + Web Access = Timeliness

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Abstract:

"The national bibliography should appear in a timely manner to meet the needs of the users."

This is one of the recommendations from the International Conference on National Bibliographic Services in Copenhagen 1998 approved by the IFLA Professional Board in 1999. In our world of virtual reality the user expects to retrieve information quickly. To meet the challenge of a users need can be quite a task.

It means that an efficient National Bibliographic Agency (NBA) is responsible for creating national bibliographic records according to agreed standards as fast as possible.

This paper will describe the Swedish way when handling timeliness.

The Royal Library, i.e. the National Library, is one of seven libraries which receive legal deposits from the printers. This law is very old – a royal decree of 1661 established the library as the first legal deposit library in Sweden. The National Library also houses the NBA and the legal deposit is the basis for the national bibliographic registrations. It is a guarantee for ensuring the cultural heritage to be preserved and made accessible for current and future users.
http://www.kb.se/ENG/kbstart.htm

If your ambition, however, is to be a fast service tool for the book market on the whole and create records in connection to the release of a new book, the legal deposit is seldom of use in Sweden. It will appear too late in the library. If you have this particular aim you need to co-operate with other performers on the book market.

When the NBA was established in 1953 we received new books from many publishers for the current national bibliography but it worked in a rather haphazard fashion. Due to an official report in the mid-1980s we reached an agreement in 1989 with the wholesale company BTJ Seelig. Seelig is the distributor for most of the commercially interesting books published in Sweden and they were willing to deliver the new volumes every single day as soon as they got them from the publisher – and that is often some weeks before the release. Seelig was also willing to supply some sort of very rudimentary but nevertheless bibliographic records – similar to CIP. This early stage of bibliographic information derives from the publishers and the records contain information about author, title, ISBN and approximate week of release. The records are exported regularly to the Swedish database LIBRIS to be used on the web by anyone.

A few words about LIBRIS: LIBRIS is a database common for ca 200 Swedish libraries, mainly research libraries. Swedish literature is almost completely covered from 1600 until today, and there are also many foreign titles. Titles covered are monographs and periodicals as well as articles, maps, printed music, and some kinds of electronic resources.
http://www.libris.kb.se/

The libraries make their registrations online in LIBRIS and after that the records are transferred to their respective local databases. That means that as soon as a library has got a book, some sort of bibliographic record will appear in LIBRIS. The library chooses any of the descriptive levels according to the Swedish translation of AACR2. A second library accepts the record –adds some local information – or if they want a fuller description, add more general elements to the record. The record is immediately updated. The general fields in the record can be changed until the NBA puts its hallmark on it. After that the bibliographic record will be locked.

Returning to the Seelig agreement: In excange for the pre-information and the book which is kept in the National Library the NBA - within 8 working hours from the delivery - updates the rudimentary record to a full national bibliographic level. After that it will be re-exported to Seelig's database from which catalogue information for the booksellers is produced. The LIBRIS user has free access to the record on the web in a service named LIBRIS WebSearch.

This exchange of services enables a national bibliographic record in time for the release of a book to meet a possible need for the user whoever it may be.

In the printed, annual Swedish national bibliography for the year 2000 61 % of the titles are considered to be commercially interesting. The remaining 39 % are publications from associations, commercial firms, official authorities, and private persons. Ca 70 % of the commercially interesting books were obtained from Seelig and thus catalogued in LIBRIS on the national bibliographic level within the 8 working hours from the delivery.

It is obvious that the 8 hours agreement for certain kinds of material forces us to handle parts of the rest, i.e. parts of the legal deposit, at a slower rate. But we have the rule that within 5 days from the unpacking there must be at least a rudimentary record in LIBRIS – similar to those from Seelig - containing information about author, title, year, ISBN and local information about what date the book was received by the NBA. The input from other LIBRIS libraries improves the record even if it will not become a national bibliographic one until the NBA decides it to be. Sometimes it makes no difference to the user.

Each Friday a new list of recently published, commercially interesting books appears on the web site of the Swedish Booksellers Organization. The list contains the bibliographic records from LIBRIS according to the NBA selection criteria and created during the last week by the NBA.
http://www.svb.se/svbokforteckn.htm

These records and the earlier mentioned 39 % are printed in quarterly published volumes – Svensk bokförteckning – which later on are cumulated in an annual volume. Today the printed volume is the only way to get a survey of the published output included in the national bibliography.

Our ambition in Sweden is to publish the printed annual volume as soon as possible after the New Years Eve – in reality the volumes use to appear in May. Books older than two years are not included. The five- or ten-yearly cumulations were discontinued in 1985 and are now found as national bibliographic records in the vast LIBRIS database.

There is of course a desire to gain access to the entire national bibliography on the web. A national bibliographic database updated each day with records of new publications and retrospective ones for the user to browse is high on our list of priorities. A web bibliography will supply the user with much more information and many more access points than what is possible in a printed one – but there is also this problem of preserving the records for the future in a secure way. The printed national bibliography is still the best means in which to do this.

Co-operation with the publisher has also been developed in a service named Förlagsdata (Publishing Data). The publisher is welcome to add a picture from and a text about the book by e-mailing gif- or jpg-files using the ISBN in the ”topic” field to the LIBRIS Department. The picture will appear in the upper right corner of the bibliographic record in LIBRIS WebSearch and you click on the picture to enlarge it. The user will find the text by clicking on ”The publisher's description of the book”. You gain access to the content in the text by free text search, a service that adds a lot more to the record for the benefit of the user.

Conclusion: To supply a user with national bibliographic information you need to rely upon the legal deposit. Nevertheless if you want it to be quick or if you want to include more information in the record than the National Bibliographic Agency is capable of doing you have to co-operate with the book market. The free web resources of today give more people better access to national bibliographic records than ever before.

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The National Bibliography Concept in a Changing Information Environment

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Introduction

New information carriers that emerged at the end of the 20th century have widened the traditional definition of the book. For this reason the range of objects to be recorded in the national bibliography has expanded. The questions of how and to what extent the changing information environment has influenced the concept of the national bibliography were addressed at the Conference *The National Bibliography in a Changing Information Environment* held in Tallinn on 12-13 October last year. The arrangement of the Conference was, no doubt, prompted by the 475th Anniversary of the Estonian book, celebrated as the Year of the Estonian Book, to recognise the printing of the first Estonian-language book.

The National Library of Estonia, organiser of the conference, invited experts on the topic of national bibliography from neighbouring states – Finland, Sweden, Norway, Latvia, Russia and also the Czech Republic - to make presentations. The conference was sponsored by NORDINFO (the Nordic Council for Scientific Information), the Central Committee of the Estonian Book Year and the Cultural Endowment of Estonia.

The main subjects discussed at the conference were: changed functions of national bibliographic data, the scope of the national bibliography, legislation regulating delivery of legal deposit copies, the production and use of the national bibliographic data, the recording of Web documents as an essential part of national heritage, and also retrospective conversion.

Legal Deposit and the National Bibliography

The current concept of a national bibliography is largely based on the definition of a national publication, which is, in its turn, connected with the Legal Deposit Law. This was emphasised at the International Conference on National Bibliographic Services (ICNBS) , sponsored by IFLA and held in 1998 in Copenhagen to review and update the Paris principles of 1977. As Gunilla Jonsson from the National Library of Sweden states in her report, the legal deposit arrangement is also the foundation of a rational and economic division of work internationally. In the recent years the need to revise existing legal deposit acts has been placed on the agenda of many countries.

Riitta Mattila, legal deposit specialist from the National Library of Finland, shared her insights about the Finnish legal deposit system. The present Finnish Act and statute on legal deposit came into force in 1981, and it covers all types of printed publications as well as sound recordings. The Finnish Ministry of Education has set up two working groups for revising the Legal Deposit Law. One of the central aims is to extend the legal deposit system to cover all types of electronic materials.
The proposed Act on Legal Deposit covers both static and dynamic online publications and aims at minimising efforts required on the part of the library and publishers. This is one reason why this proposal does not specify in detail how electronic material should be collected.

Riitta Mattila's report reminds us that one of the problems is the harmonisation of laws. The legal deposit of electronic materials depends on copyright regulations and the Finnish Copyright Law depends on the EU regulations concerning electronic materials. Hopefully, a new Finnish Legal Deposit Act will take effect in 2002.

In the next Conference report, I discussed the legal deposit situation in Estonia. During the past decade, the number of legal deposit copies as well as the scope of the Estonian Legal Deposit Act have changed considerably. In 1992, the provision of legal deposit copies was specified by Government regulation requiring publishers to provide 28 deposit copies from each edition that exceeded 50 copies. The Legal Deposit Act passed in 1997 is considerably more publisher-friendly, providing for eight legal deposit copies to be delivered in total. The new Act covers printed material as well as audio-visual items and electronic publications.

Currently, it is on the agenda in Estonia to complete the Legal Deposit Act in relation to online publications. On the other hand, there have been proposals to further reduce the number of legal deposit copies. This autumn the National Library of Estonia intends to put forward its suggestions for amendments of the current Act.

Unni Knutsen from the National Library of Norway gave an overview covering the administration of the Norwegian Legal Deposit Act. The present legal provision came into force in 1990, giving Norway one of the most comprehensive systems of legal deposit in the world. The regulations are currently under revision. Ms. Knutsen viewed the increasing flow of material as the greatest challenge in the field of legal deposit. Therefore, discussions on selection criteria will be even more important in the future.

The Scope of the National Bibliography

The fourth ICNBS recommendation states: "National bibliographies should include the current national output, and where practicable they should also provide retrospective coverage". The fact that the retrospective conversion is continually a topical issue was reinforced by several presentations at the Tallinn conference. Anita Goldberga from the National Library of Latvia gave an overview of the retrospective conversion project, begun in 2000, of the printed Latvian national bibliography. The largest amount of bibliographic information (about2.5 million records) in Latvia is still available only in printed form. The long-term aim of the project is to create a unique national cultural database (from the mid 18th century to 2000) converting printed indexes of the national bibliography into machine-readable form (some 136,000 pages of text). Tasks to design and test software that integrated standard applications to carry out further retrospective conversion were successfully fulfilled during the first stage of the project last year. Converted and current national bibliography data will form a database within the national union electronic catalogue and will serve as the basis for the national document delivery system.

Bohdana Stoklasova introduced the Czech Republic's experience in pursuing retrospective conversion. She provided an overview of the project RETROCON, which enabled the availability of the Czech national bibliography for the whole 20th century on the Internet as well as within the National Library' s database, in the Czech Union Catalogue, and in OCLC's WorldCat. Ms. Stoklasova discussed and critiqued the application of standards in Czech libraries from the second half of the 1980s to the present, confirming the importance of observing international standards in compiling the national bibliography. For me and my Estonian colleagues, this presentation was extremely educational, and we enjoyed the pleasure of recognising similar problems.

In 1997, seven major Estonian research libraries established the Consortium of Estonian Libraries Network (ELNET Consortium) with the aim of purchasing and implementing a common integrated information system. This goal was achieved in 1999 when Estonian research libraries started to use INNOPAC. The implementation of this ILS raised the compilation of the Estonian national bibliography to a new qualitative level. MARC 21-format, ISBDs, Anglo-American cataloguing rules (AACR2), UDC, and the Estonian Universal Thesaurus were the standards adopted for cataloguing.

The implementation of INNOPAC lead to a number of development projects, in particular one to achieve retrospective conversion. Building on the experience of other countries, Estonian libraries started the retroconversion of national bibliography data. In 1999, the National Library of Estonia launched the following retroconversion projects: (1) the retrospective conversion of Estonian books published 1945-1991; (2) the re-cataloguing of books in Estonian published 1918-1940; and, (3) the re-cataloguing of Estonian periodicals published 1945-1993.

Anne Ainz from the National Library of Estonia spoke about the project to re-catalogue books in Estonian published between 1918-1940. The main reason for re-cataloguing these publications was the fact that national bibliographies covering this period are incomplete, due to insufficient legal deposit copies of that time and the change of selection criteria.

Tiina Aasmann from the Estonian Academic Library introduced the programme of the Estonian retrospective national bibliography that was launched in 1978. By now this programme has achieved its basic goal to register all Estonian-language printed works. The compilation of the bibliography of foreign-language books published in Estonia until 1940 and of books related to Estonia is unfinished. The major part of the retrospective national bibliography entries has been converted into the electronic catalogue ESTER of the ELNET Consortium.

Olga Kuliš from the National Library of Russia discussed the impact of new technology on the compilation of the national bibliography, and the advent of new opportunities for co-operation. Ms. Kuliš indicated that in the new political environment, the Russian national bibliography is not considered to be the state bibliography. It is based on the language principle of the Russian book without boundaries rather than on the territorial principle. Her presentation provided an impressive overview of National Library of Russia's role within the Consortium of European Research Libraries (CERL). Taking into account CERL's primary objective to record all books printed in Europe during the hand-press period (i.e. before 1830), the National Library of Russia started to prepare a database of *Russian Civil Press Books of the 18th Century in the Collection of the National Library of Russia* database. Ms. Kuliš also described the compilation of the *Union Catalogue of Russian Books of the Period from 1918 to 1926*, which contained information about the collections of 150 libraries (of which about 100 were foreign).

On the whole the national bibliography in Russia is a fairy flexible system which is structured not only from the centre downward to the regions, but also from the regions upward. In recent years, provincial research libraries have been active in collecting local publications. When a regional library sends information about books published during the first nine post-revolutionary years to the National Library for the union catalogue, they usually combine the information about collections of their libraries with the information about the university library of their city. Ms. Kuliš pointed out that during the 1950s-1980s, the national bibliography was fairly rigidly regulated -- principles of selection were often ideologically motivated and the work was strictly subordinate to the centre. But, continuous technological modernisation of libraries has contributed to development of the concept of a more dynamic national bibliography.

Unni Knutsen's summary of a study of the bibliographic recording of Norwegian legal deposit material and the Norwegian national bibliography was of great interest. This study, carried out by Barbara Bell, resulted in a report that contained 25 recommendations. On the issue of the scope of the national bibliography, the report suggested an expansion to include films, video recordings, as well as elementary and secondary school textbooks. The report concluded that broadcasting material, pamphlets, photographs, posters, and the bulk of the electronic material on the Internet are not part of the national bibliography. It recommended that the national bibliography should provide references to material not included. I believe that these suggestions form the basis for the compiling a truly effective national bibliography.

Discussing the scope of the national bibliography, Esko Häkli from the National Library of Finland pointed out that electronic publishing would change the selection of the objects to be recorded. The traditional distinction between books, periodicals, and articles will lose its meaning in that the primary unit will no longer be a book with chapters or a journal volume with articles. Instead, the primary unit will be a chapter or an article, which needs to be recorded in such a way that it can be accessed easily. In Finland, a separate database (ARTO) is maintained as an index to Finnish periodicals, but it is not considered as part of the national bibliography. It not part of the Estonian or Norwegian national bibliographies either, but belongs to the Latvian national bibliography. But as Unni Knutsen indicated, there has been uncertainty about including the indexing of periodical articles in the Norwegian national bibliography. Related discussions were held four years ago between Estonian research libraries as well. The situation has been resolved by the involvement of seven Estonian research libraries in the creation of an article database that is freely available through the electronic catalogue ESTER.

Though the legal deposit act is considered to be a basis for the compilation of the national bibliography, some countries have begun to include records for publications even though they are not yet authorised. Sinimarja Ojonen from the Helsinki University Library reported about cataloguing online serials into the Finnish national bibliography. She introduced the project EVA (*Acquisition and Archiving of Electronic Network Publications*) that is supervised by the Helsinki University Library. This initiative touches upon the basic question of the cataloguing policy concerning Internet resources: should we begin to catalogue domestic online publications in the national bibliography even though they are not covered by legal deposit? Of the test material, 540 serial-like titles, 155 bibliographic records were included into the national bibliography. They were selected according to the following criteria: (1) The serial must include full text articles. (2) The articles must have informational value and the serial have professional editing. And, (3) the serial much archive its articles. Sinimarja Ojonen expressed the view that in cataloguing online resources -- especially of the integrating type -- the emphasis should be on access instead of description.

In 2000, the National Library of Estonia launched the project ERICA (*Estonian Resources on the Internet: Cataloguing and Archiving*). The central aim of this project is to create methods and tools to collect, register, and archive Estonian Internet publications to establish conditions for their long-term preservation. Development of selection criteria for such publications mainly proceeded from the criteria used for traditional publications. Presently, about 300online periodicals have been selected, and about 100 have been registered in the Estonian national bibliography.

Gunilla Jonsson discussed co-operation between libraries and publishers, and publishing trends, emphasising the problems connected with e-books. E-books can be treated much like paper books; certainly they belong to the publishing output of a country and should be included in the national bibliography. The National Library of Sweden has started to collaborate with e-book publishers, taking on the responsibility of archiving their electronic books and providing readers with access to them via the Library's terminals. Publishers have proved interested in including their products in the national bibliography (that is, in the *Libris* database).

The more the publishing industry embraces the electronic environment, the more essential is co-operation between publishers and national libraries. Silvi Metsar from the National Library of Estonia reviewed the publishing within Estonia during the 1990s. She highlighted three distinct periods: (1) political breakthrough (1987-1991), (2) foundation of the basis for the restored Estonian Republic and the introduction of radical economic reforms (1991-1994); and, (3) economic and cultural stabilisation (1994-1998). In 1997, about 3500 titles appeared in Estonia. Thus, measured by book production, it ranked fourth after Iceland, Finland, and Denmark. E-publication is only beginning to develop in Estonia, and legislative problems concerning the harmonisation of copyright acts of different countries need to be solved.

The cataloguing of online publications and the future of cataloguing in general was thoroughly discussed by Eeva Murtomaa from the Helsinki University Library. She stressed two key words - *harmonisation* and *integration* - which were specially emphasised at the last IFLA conference. From a cataloguing point of view this means that cataloguing standards, formats, and rules for different materials will be harmonised and integrated with each other. In the Web environment, the cataloguer is more and more responsible for the quality of the service. The quality of the library catalogue depends very much on the selectivity and relevant predetermination skills of the librarians.

The Production and Preservation of National Bibliographic Data

Unni Knutsen reported that the Oslo Division of the National Library of Norway has spent much time analysing the *Recommendations of the International Conference on National Bibliographic Services (ICNBS)*, an exercise which has occasioned a general overview of their bibliographic situation. One recommendation stresses the need to preserve the national bibliography. In Norway, the annual bibliography and list of new titles are the only remaining printed products. The CD-ROM version of the bibliography was stopped by the mid-2000. But, all national bibliographic databases have been on the Internet for years. The Bell report mentioned above suggested that annual printed issue should appear in print form as long as it is economically viable. This format meets the needs of users with no electronic access while serving as a preservation copy of the bibliographic records for the specified period. Norway is working out arrangements to enable preservation of its databases.

Ene Loddes from the National Library of Estonia provided information about the organisation of publications comprising the Estonian national bibliography. Currently,.the national bibliography in printed form appears in the following series: *Books, Periodicals, Music and Official Publications.* Taking into account Estonian users, this practice should be certainly continued, at least for awhile. Printed publications of the current national bibliography are compiled on the basis of the records entered into the union catalogue. Thus, the national bibliographic database is an integral part of the Estonian research libraries' union catalogue which can be accessed the Web-catalogue ESTER (http://helios.nlib.ee). In the near future, the Estonian national bibliographic database will be made accessible as an independent online database.

Gunilla Jonsson discussed the Swedish case where records used to produce the printed national bibliography are stored in the same union database as are records for all sorts of library collections as well as of Swedish non-commercial publications that do not appear in the printed national bibliography.

Tomas Lidman from the National Library of Sweden approvingly noted in his conference address: "Due to the new technology used in Finland the bibliography can be accessed only via the Internet. In Sweden we still publish in the ordinary way but we intend to follow the Finnish example soon."

Conclusion

In drawing conclusions from the Conference, it was recognised unanimously that the changing information environment has essentially influenced the concept of the national bibliography. A number of legal problems need to be solved. Above all, many countries face the need to complete their Legal Deposit Acts. Gunilla Jonsson's statement summarises an idea expressed by several speakers: "We live in a time when the information landscape is changing more rapidly than ever before in history. One thing, however, remains similar to the take off of national bibliographies in the beginning of the 19th century, libraries and publishers must co-operate."

I hope that this report has succeeded in its goal of sharing the ideas that were presented in Tallinn last year. For further information regarding the conference, please visit the Web site of the National Library of Estonia at the following address: http://www.nlib.ee.

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Changes in the National Bibliographies, 1996-2001

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Abstract:

This paper presents the results of a survey on national bibliographies among the members of the Conference of Directors of National Libraries in 2001. The survey is a follow up of Robert Holley's study "Results of a 'Survey on Bibliographic Control and National Bibliography'" that was carried out in 1996. All parts of the world are represented by 52 responses. The main findings of this survey are that legal deposit legislation still emphasises textual material but many agencies presently revise their legislation to include more types of material, in particular electronic documents. Furthermore, print remains the preferred format for national bibliographies but more and more agencies are focusing on Internet access. More than half of the agencies are undertaking or planning retrospective conversion programmes.

Background

Project assignment (1999/2001)

The IFLA Section on Bibliography's Action Plan for 2000-2001 has the following provision:

"4.1. Identify appropriate action to follow up regarding findings of the study "Results of a 'Survey on Bibliographic Control and National Bibliography'" undertaken by Robert Holley".

During the Standing Committee meeting held in Bangkok, Thailand August 1999 the author volunteered to pursue this activity for the section. During the Jerusalem conference in 2000, the author presented her proposal for a follow up to the Standing Committee meeting.

The Section on Bibliography has initiated several studies during recent years. Robert Holley's study "Results of a 'Survey on Bibliographic Control and National Bibliography'" was carried out in 1996. Information gathering was also an important tool in the preparation of the International Conference on National Bibliographic Services (ICNBS) in Copenhagen, 1998. John Burym's study "Inclusion of Information Covering Electronic Resources in National Bibliographies" provided very useful information on the level of inclusion of electronic documents in national bibliographies. The most recent survey by Barbara Bell and Annema Hasund Langballe was carried out in 2000/2001. Unlike the Holley and Byrum surveys that focus on types of documents included in the national bibliographies "An Examination of National Bibliographies and their Adherence to ICNBS Recommendations" deals with the formal presentation of document description included in the national bibliographies and on the formal presentation of the bibliography itself. Like the Holley study it also focuses on standards used. The main issue of the Bell/Langballe survey was, however, to identify the national bibliographic agencies that are especially effective by virtue of their ability to meet the criteria and provide the features identified in the "Final Recommendations of the International Conference on National Bibliographic Services" of 1999, paragraphs 1,5-11 and to identify those services which could improve effectiveness through greater conformance to the recommendations.

Working methods

The mission given to the author by the Section on Bibliography was to do an update of the findings of Robert Holley. Being aware of the fact that the Bell/Langballe study would cover parts of Holley's work, this update tried not to duplicate their work to any extent. Some duplication was inevitable as the two surveys study the national bibliographies from different perspectives. Unlike Holley, this study did not pay attention to the frequency and cumulation patterns of the national bibliographies or the standards used. It does not focus on who the producer of the national bibliography might be, or on the reasons for preparing a national bibliography as these issues were considered to be settled by the ICNBS recommendations.

To make comparison with the Holley survey easy care was taken to phrase and organize the follow-up questionnaire in a similar manner (Appendix 3). It was, however, adjusted to include recent changes such as the inclusion of electronic books and journals. It also added a few questions on issues which should be raised, e.g. the existence of retrospective coverage and the pricing policy.

The main aims of the survey was:

- To ask about the existence of legal deposit in each country
- To determine the extent of bibliographic control by national agencies and whether there is coherence between bibliographic control and legal deposit.
- To identify forthcoming changes in the area of bibliographic control and legal deposit
- To ask about the existence of a national bibliography, its coverage and formats
- To investigate whether all the material under bibliographic control is included in the national bibliographies
- To determine the extent of changes in the national bibliographies during the 1996 to 2000 period and the anticipated changes during the period 2001-2006.
- To determine whether national bibliographic records are available online

- To determine the extent of retrospective conversion programmes
- To determine whether the national bibliographic records are available free of charge

The main hypothesis was that many bibliographic agencies have started to include electronic documents in the national bibliographies. It was also assumed that many countries now make changes in their legal deposit acts to include non-book material in general and electronic documents in particular and that the national bibliographies would reflect these changes. It also assumed that the format of the national bibliography has been changing from print to Internet to a certain extent and that this trend will continue and even accelerate in the years ahead. The author further assumed that the developing countries would have print as the main format of the national bibliography, but that they wish to publish the national bibliography on Internet as soon as the situation allows.

In April 2001 the author circulated the survey to the members of the Conference of Directors of National Libraries (CDNL) via a mailing list provided by IFLA. A total of 97 surveys were sent by email with instructions to return the survey by June 1st. After having compared the list with an address list of all CDNL members the author was able to send the remaining members the survey by mail. A total of 138 member countries were addressed. The author encouraged the members to contact me by telephone, email or fax if they had any questions on the survey.

The response rate

By June 1st approximately 30 responses had been received. A reminder was therefore issued-- to urge especially those countries that had responded to Holley's survey to respond by July 1st By that date responses from 52 countries or regions (Appendix 1) had been returned, which gave a return rate of 37.7%. The return rate was disappointingly low as compared with Holley (52%). Bell/Langballe had, however, a return rate of 42.3% to a letter sent out in August 2000. The low response rate may be partly due to a certain fatigue towards answering surveys. On the other hand some addresses and email addresses were inaccurate and returned to sender. The relatively low response rate from Spanish and French speaking countries may be due to the fact that the survey was in English only.

Of the 52 responses, 35 were returned via email, 9 by fax and 8 by letter. Thirty-six (36) of the responses were from countries that had responded to Holley's study as well. It, therefore, seemed appropriate to compare the findings of the two surveys.

The response rate by geographic area was as follows:

Region	Number of countries	Percent 2001 study	Percent 1996 study
Africa	12	23.1	12.5
Asia[1]	11	21.1	21.8
Europe	20	38.5	50.0
North America [2]	3	5.8	9.4
Pacific Ocean[3]	2	3.8	1.6
South America	4	7.7	4.7

The author was especially pleased with the increased response rate from African countries.

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[1] Includes Middle East area

[2] North America includes Central America and the Caribbean

[3] Oceania with Australia and New Zealand

Classification of economies by income[4] shows the following distribution:

Economic level	Number of countries	Percent
Low-income	8	15.4
Middle-income	23	44.2
High-income	21	40.4

To give a representative picture of the worldwide situation, the number of low-income countries should have been around 30% and the percentage of high-income countries around 23.5%.

Survey results

Bibliographic control

Legal deposit laws

Not all agencies answered the question about the existence of a legal deposit law (accurately). In these cases it proved useful to consulted Barbara Bell's: "Annotated Guide to Current National Bibliographies" (1998) and the earlier mentioned Bell/Langballe report. Switzerland reported the absence of legislation where documents are compiled through an agreement with the Swiss Editor Association. It was not clear whether Kazakhstan has a legal deposit act, but it seemed reasonable to assume not as they reported: "In future laws will be issued legally securing our rights". Apart from these two countries, there is provision for legal deposit in the remaining 50. This gives a percentage of 96.1 (Holley 92.2%).

Types of materials under bibliographic control

The following table presents the number and percentage of those agencies that answered "yes" for each kind of material under their bibliographic control. The change in the percentage between this study and the Holley study is given. Please note that the Holley survey did not cover e-books and e-journals:

Types of materials under bibliographic control	**Number of agencies**	**Percentage**	**Percentage in 1996 survey**	**Change in percentage points from 1996 to 2001**
Books	52	100.0	96.9	3.1
Serials	48	92.3	93.8	-1.5
Textbooks	48	92.3	81.3	11.0
Conference proceedings	47	90.4	85.9	4.5
Maps	46	88.5	70.3	18.2
Official documents from government	46	88.5	87.5	1.0
Music	41	78.8	65.6	13.2
Pamphlets	39	75.0	67.2	7.8
Sound recordings	35	67.3	54.7	12.6

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[4] Source: World Bank data 2000

Graphic materials	34	65.4	48.4	17.0
Dissertations	34	65.4	68.8	-3.4
Microforms	30	57.7	46.9	10.8
E-books	28	53.8	NA	NA
Computer files and software	27	51.9	31.3	20.6
Motion pictures and video recordings[5]	26	50.0	40.6	9.4
E-journals	26	50.0	NA	NA
Other electronic documents	25	48.1	NA	NA
Periodical articles	20	38.5	51.6	-13.1
International government publications	19	36.5	29.7	6.8

These results show that there is still emphasis on the bibliographic control of text formats. The relatively high percentage of bibliographic control upon e-books and e-journals is, however, encouraging. It is also encouraging to see that there has been an overall increase in the percentage of materials under bibliographic control.

Less than half of the agencies have bibliographic control of the international government publications. Paragraph 18 in the ICNBS recommendations states: "IFLA should encourage intergovernmental and international non-governmental organizations to record their publications in bibliographies (preferably their own), according to internationally agreed bibliographic standards". In order to secure these documents properly, this might be an area to pursue.

The agencies were also asked to indicate whether the material under bibliographic control is included in their legal deposit. Even though some agencies did not fill in this information, the result was quite interesting. It clearly indicated the emphasis on textual material in current legislation. Ten agencies or more indicated that the following material under bibliographic control is not subject to legal deposit: sound recordings, motion pictures and video recordings, graphic materials, computer files and software, microforms, e-books, e-journals and other electronic documents. The list also included some textual material such as official publications of government, international government publications, periodical articles and (sheet) music.

Although it was also discovered that some agencies did not have bibliographic control of all materials under legal deposit, no particular pattern could be discerned.

Several agencies pointed to the fact that other agencies in the country were responsible for the bibliographic control of a particular material. Several countries reported that motion pictures were the responsibility of the national film and sound archive. In some countries the agencies reported that the library of Parliament or similar institutions are responsible for bibliographic control of governmental publications.

Changes in the area of bibliographic control and legal deposit

One of the questions asked was whether the agencies foresaw any major changes in the area of bibliographic control and legal deposit within the coming five years. The response rate and the details rendered to this question were very interesting.

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[5] Several agencies emphasize that only video recordings are under bibliographic control

Many agencies report that revision work on legal deposit legislation is being planned or has already started. A few agencies report that revision is pending, but not yet enacted by government. Among these countries are Australia, Swaziland and Iceland. Other agencies express an ambition to start revising the legislation. One might conclude that this shows an awareness of the need to revise legislation in accordance with the ICNBS recommendations, paragraph 1: "States should, as a matter of urgency, examine existing deposit legislation and consider its provisions in relation to present and future requirements, and, where necessary, existing legislations should be revised".

The ICNBS recommendations, paragraph 3 further stated: "New deposit laws, or regulations pursuant to such laws, should state the objective of legal deposit; should ensure that the deposit of copies is relevant to achieving the goals stated above; should be comprehensive in terminology and wording to include existing types of materials with information content and others which may be developed; and should include measures for enforcement of the laws. Such legislation may take into account the possibility of sharing responsibility for deposit among more than one national institution".

The main concern of the agencies in this survey was the inclusion of electronic material. A few agencies pointed out that forthcoming legislation should also include specific textual material and non-book material not included in the present legislation, e.g., CD-ROMs, sound recordings, videos, dissertations, conference proceedings and periodical articles. This clearly shows the awareness of including the current national output under bibliographic control. It seems quite natural that agencies having most of the national input under bibliographic control mention inclusion of electronic documents as an area for revision. That some agencies with a relatively limited number of materials under control merely mention electronic documents as an area for revision is a bit worrying. It was, however, encouraging to see that some agencies were careful of mentioning that the legislation should comprise all forms of published material irrespective of medium.

Portugal reported that they had prepared a new legal deposit act to" … better regulate the number of items to be deposited and the sound recordings, broadcasting materials, films and audiovisual materials deposits in special institutions". By ensuring that the number of copies is relevant and by including the sharing of responsibility for deposit with other agencies, Portugal is introducing changes fully in coherence with the ICNBS recommendations.

Several agencies reported that publishers do not comply with the legal deposit law. Consequently, they experience problems in claiming the missing documents. Swaziland was perhaps the country that pronounced most clearly its hope for an improved collection of materials under its new legislation. The Swaziland National Library Service plans to embark on an aggressive campaign in the collection of legal deposit material as soon as the legislation is in place. One agency wanted to introduce a heavy penalty for defaulting to the legal deposit act. This shows that the ICNBS recommendation to "include measures for enforcement of the laws" is indeed relevant.

Switzerland reported: "The Swiss National Library is working to introduce a legal deposit law within the next five years in order to also include all electronic documents (on- and offline)". If such a change is introduced it would be in coherence with the ICNBS recommendations, paragraph 2: "States currently without legal deposit legislation are urged to introduce it".

The National bibliography

When asked whether there is a national bibliography in their country, 51 agencies answered yes. The United States answered that they did not have a national bibliography per se and that the nearest functional equivalent is the MARC Distribution Services, available on subscription from the Library of Congress Cataloging Distribution Service. The response from the United States is, however, included in the figures below. None of the agencies reported any plans to eliminate the national bibliography within the next five years.

When asked about plans for making significant changes in content, coverage or frequency, 20 agencies reported that no major changes were foreseen, 6 did not indicate an answer whereas 26 confirmed that major changes are likely to take place. These changes mostly pertain to content and coverage and less to frequency. As could be expected the agencies wish to include electronic documents. The national bibliographies will also include other types of materials depending on provisions in the forthcoming legal deposit legislation.

Several national bibliographic agencies were concerned with the format of the national bibliography and indicated that they are reviewing the present format(s). These agencies are discussing whether to move away from the print format and evaluating whether they should introduce or cancel the CD-ROM format. There is increased focus on online or even Internet access.

Namibia, Iran and Uruguay are examples of countries that would like to publish their printed bibliography more frequently. Switzerland and Germany indicated a change in standards (changing to Dewey Decimal Classification). Norway reported that it is launching a programme for improving on timeliness and coverage.

Materials covered by the national bibliography

The following table presents the number and percentage of those agencies that answered "yes" for each kind of material. Two agencies did not answer this part of the survey, leaving the total number to 50.

Types of materials included in the national bibliography	**Number of agencies that include:**	**Number of agencies in percent**	**Added 1996-2000**	**Deleted 1996-2000**	**To be added 2001-2006**
Books	50	100	1		
Official publications of your government	43	86	2	1	1
Conference proceedings	43	86	1		1
Serials	42	84	1		2
Textbooks	42	84	1	1	1
Maps	33	66	2		3
Music	32	64	3	1	5
Pamphlets	31	62	1		1
Dissertations	29	58		1	3
Material about the country published abroad	26	52		2	2
Sound recordings	25	50	3		4
Microforms	23	46			10
Motion pictures and video recordings[6]	20	40	4		5
Graphic materials	19	38	4		5

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[6] Several report that they only catalogue video recordings

Periodical articles	16	32	1		5
Computer files and software	15	30	4		9
E-books	15	30	5		21
Other electronic documents	15	30	6		14
E-journals	13	26	5		19
International government publications	11	22			1

This table shows that there is still an emphasis on text formats. It is, however, encouraging to see that newer material such as e-books and e-journals to a certain extent are being included in the national bibliography. Such a development was foreseen in the Holley study based on the input from the institutions. It is also encouraging to note that many agencies plan to include this material within the next five years. The fact that there were no future plans for excluding any form of material was also appreciated. The overall impression is that the plans include adding more formats to the national bibliography.

Nevertheless, during the period 1996-2000 some material has been excluded: Egypt reports that the country no longer records textbooks. The Romanian national bibliography official publication series ceased in 1999. The National Library of Scotland has stopped cataloguing music. From 1999 Denmark no longer records materials about the country published abroad. In the Czech Republic the responsibility for dissertations has been transferred to the National Technical Library. Materials about the country published abroad are no longer part of the Czech national bibliography. A decision has been made to concentrate on better coverage and processing of materials published within the country.

With the exception of books the percentage of materials under bibliographic control is higher than the inclusion rate of the materials in the national bibliographies. As more comprehensive legal deposit acts are introduced, one may expect that this gap will increase and trigger a discussion of the role, content, and level of description in the national bibliography. This study did not, however, investigate whether selection criteria are defined and published by the national bibliographic agency in accordance with paragraph 4 in the ICNBS recommendations: "National bibliographies should include the current national output, and where practicable they should also provide retrospective coverage. When necessary, selection criteria should be defined and published by the national bibliographic agency".

The format of the national bibliography

Appendix 2 reveals the current formats of the national bibliographies. One of the aims of this study was to discover any recent changes in the format. The print format is still strong, but less so than in 1996 when Holley reported that 90.3% of the agencies provided a printed version. Seventy-five percent of the national bibliographic agencies now maintain a printed national bibliography. This is a trend that will continue, one assumes, since several agencies have indicated that they consider ceasing the print format. Most of the agencies that have print as their only format represent low-income nations.
Internet is the next most preferred format with 40.4 % (Holley 46%). In reporting Internet access. not all agencies distinguished between the catalogue of the library and the national bibliography. The figures will therefore not be accurate and not totally comparable to Holley's findings.

CD-ROM is the third most preferred format with 36.5% (Holley 43.5%) closely followed by online access (other than Internet) 30.8%. Some agencies like Norway and Scotland have stopped producing CD-ROMs and in the future several others will are likely to follow, concentrating on Web access. On the other hand, several agencies state that they are planning to produce CD-ROMs in the future. Also Holley reported that the agencies would move to CD-ROM publication. The computer tape (Holley 27.4%), floppy disk (Holley 25.8 %) and microfiche formats (19.4%) are loosing ground with 13.5%, 13.5%, and 1.9% respectively. Most agencies still distribute their national bibliography in multiple formats.

National records as an online resource

Approximately one quarter of the respondents did not have on-line records. These countries were mainly among the lower income countries. This is about the same result as in 1996 when 76.2% of the reporting agencies created machine-readable bibliographic records. When asked about how agencies make the online national bibliographic records available, several multiple answers were given. Sixteen answered that the records were mixed in as part of the file that includes all records held by the agency. Seventeen reported that the records are in a separate file of materials published in the country and held by the agency. Twelve stated the records were mixed in as part of the union catalogue of all records held by several agencies whereas six had their records included as part of a union catalogue of materials published in the country and held by several agencies.

Whereas national bibliographic records often exist in separate files, they are also frequently part of the national agency's catalogue and/or the union catalogue of a particular country.

When asked whether major changes in the way the agencies made the national bibliographic records available had occurred during the period 1996-2000, about half of the responding agencies that answered the question did so in the affirmative. Typical changes are the production of CD-ROM or the presentation of the database on Internet.

When asked about future changes, about half of the agencies that responded answered that they foresee major changes. Again, the changes usually pertain to establishing or ceasing the CD-ROM format and/or establishing an Internet version. Some agencies foresee changes in connection with a change of library system. Others plan to stop the production of the printed bibliography or introduce the national bibliography as a separate file. Generally speaking the agencies that have their national bibliography on Internet tend to answer no to the question on major changes in the future.

Several agencies such as Botswana, Egypt, Kenya, Tanzania, and Zambia hope to have their national bibliography online as part of their computerisation scheme.

Retrospective coverage

The survey included a question on retrospective coverage to solicit obtain information on the situation in this field. The ICNBS recommendations, paragraph 4 states: "National bibliographies should include the current national output, and where practicable they should also provide retrospective coverage…"

When asked of the existence of a retrospective coverage programme in order to increase the number of national bibliographic records, 31 agencies answered yes and 9 no. Some countries like Australia have added all known retrospective records. Others have started comprehensive programmes. It is, however, saddening to see that South Africa had to abandon their project, as no funds could be obtained.

When asked about plans for retrospective conversion, 20 agencies answered yes, whereas 18 answered no. Iran is e.g. planning to catalogue 500,000 old books and include them in the national bibliography. Also special material is been converted: France will be completing the retro conversion for engravings, maps, printed music and other special material, while Denmark is planning conversion of reviews and articles from periodicals and newspapers.

Pricing policy

The last point of investigation was whether or not the national bibliographic records are available free of charge. This issue was not covered by Holley's survey, and there is no specific recommendation from the ICNBS conference in Copenhagen. Pricing may, however, influence the extent of use. When asked whether the national bibliographic records are available free of charge, 21 agencies answered yes, whereas 27 answered no. One country reported that the records are partly free.

As a general rule, publications (print or CD-ROM) are charged. This explains why there is such a high level of agencies that charge for the records. It was discovered that several agencies with the national bibliography on Internet do not charge for the national bibliographic records. Examples of this are Denmark, Norway and Scotland.

When asked about future changes, Canada anticipates receiving ministerial approval of its initiative of offering free online access to AMICUS bibliographic records. The Japanese National Bibliography will be available free of charge in April 2002. New Zealand is presently reviewing the principles on which the charging policy is based. On the other hand, Latvia plans to charge for its periodical database, and Croatia is planning to charge for the records. Other agencies state the fact that the price of the publications will change in accordance with the production costs. The picture is not in any way clear. It will be interesting to follow the development in this area as more and more agencies publish their bibliographies on Internet.

Conclusions

- Most agencies acquire materials through legal deposit
- Legal deposit legislation still emphasizes textual material
- Many agencies presently revise their legislation to include more types of materials, especially electronic documents
- In awaiting new legal deposit legislation some agencies include material under bibliographic control that is not provided for under the current legislation. The most common materials are: e-books, e-journals, computer files and software, other electronic documents, microforms and video recordings – all non-book material. The findings also included some textual material such as official publications from government and international government publications.
- The national bibliographic agencies are committed to producing national bibliographies
- The national bibliography is becoming increasingly diversified in terms of including different types of material, but there is still a clear emphasis on text formats
- With the exception of books the percentage of materials under bibliographic control is higher than the inclusion rate of the materials in the national bibliographies
- Print remains the preferred format for the national bibliography, but its popularity is decreasing. Some agencies now abandon the CD-ROM; others plan on starting CD-ROM production. There is increased focus on online and Internet access as the main format of the national bibliography. Other formats are rapidly decreasing.
- About 75% of the agencies provide machine readable online access
- Online national bibliographic records exist in separate files, as part of the national library's catalogue or as part of the national union catalogue
- More that half of the agencies are undertaking or planning retrospective conversion programmes. Some agencies have added all known retrospective data
- Publications (Print, CD-ROM) are charged. Several agencies offer their online records free of charge on Internet whereas others will charge for the online bibliographic data

July 2001

Appendix 1

Survey respondents in alphabetical order

Country	Institution	Region	Included in 1996 survey (x)
Australia	National Library	Pacific Ocean	
Botswana	National Library Service	Africa	X
Brazil	National Library Foundation	South America	X
Canada	National Library	North America	X
China	National Library	Asia	
Colombia	Biblioteca Nacional	South America	
Croatia	National and University library	Europe	
Czech rep.	National Library	Europe	
Denmark	Danish Bibliographic Centre	Europe	X
Egypt	National Library and Archives	Africa	
Ethiopia	National Archives and Library	Africa	
Finland	Helsinki University Library	Europe	X
France	Bibliotheque Nationale	Europe	X
Germany	Die Deutsche Bibliothek	Europe	X
Ghana	George Padmore Research Library on African Affairs	Africa	
Greece	National Library	Europe	X
Iceland	Landsbókasafn Íslands	Europe	X
Iran	National Library	Asia	X
Israel	Jewish National and University Library	Asia	X
Italy	Biblioteca Nazionale Centrale Firenze	Europe	X
Japan	National Diet Library	Asia	X
Kazakhstan	National Library	Asia	
Kenya	National Library Service	Africa	X
Korea (republic)	National Library	Asia	X
Latvia	National Library	Europe	X
Lithuania	National Library	Europe	X
Madagascar	Bibliotheque Nationale	Africa	X
Namibia	National Library	Africa	
New Zealand	National Library	Pacific Ocean	X
Norway	National Library	Europe	X
Pakistan	National Library	Asia	X
Portugal	Biblioteca Nacional	Europe	X
Romania	National Library	Europe	X
Russia	National Library	Europe	X
Scotland	National Library	Europe	X
Singapore	National Library Board	Asia	X
Slovenia	National and University Library	Europe	X
South Africa	South African National Bibliography	Africa	X
Sri Lanka	National Library and Documentation Centre	Asia	X
Swaziland	National Library Service	Africa	

Country	Institution	Region	Included in 1996 survey (x)
Sweden	Royal library	Europe	X
Switzerland	National Library	Europe	X
Syria	Assad National Library	Asia	X
Tanzania	Library Services Board	Africa	X
Togo	Bibliotheque et des Archives Nationales	Africa	
Trinidad and Tobago	National Library and Information System Authority	North America	
Turkey	National Library	Asia	X
United Kingdom	British Library	Europe	X
United States	Library of Congress	North America	X
Uruguay	Biblioteca Nacional	South America	
Venezuela	National Library	South America	
Zambia	National Archives	Africa	

Appendix 2

Current format of the national bibliography

Country	Print	Microfiche	Computer Tape	Floppy Disk	CD-ROM	Online	Internet
Australia						x	x
Botswana	x						
Brazil					x		x
Canada					x	x	x
China				x	x	x	x
Colombia	x						x
Croatia	x						
Czech rep.					x	x	x
Denmark	x			x		x	x
Egypt	x						
Ethiopia	x						
Finland			x		x	x	x
France			x		x		x
Germany	x		x	x	x	x	x
Ghana	x						
Greece	x				x		x
Iceland	x						x
Iran	x				x		
Israel	x					x	
Italy	x				x		
Japan	x		x		x	x	
Kazakhstan	x						
Kenya	x			x			
Korea (republic)	x				x		
Latvia	x						x

Lithuania	x					x	
Madagascar	x		x				
Namibia	x			x	x		
New Zealand					x	x	x
Norway	x					x	x
Pakistan	x						
Portugal					x		
Romania	x						
Russia	x				x		x
Scotland							x
Singapore					x		
Slovenia	x				x		x
South Africa						x	
Sri Lanka	x						
Swaziland	x			x			
Sweden	x						x
Switzerland	x						x
Syria	x					x	
Country	Print	Microfiche	Computer Tape	Floppy Disk	CD-ROM	Online	Internet
Tanzania	x						
Togo	x						
Trinidad and Tobago	x			x			
Turkey	x						
United Kingdom	x	x	x		x	x	
United States			x				x
Uruguay	x						
Venezuela	x					x	x
Zambia	x						

Appendix 3

IFLA survey on national bibliography

Name of agency:	
Address:	
Person answering survey:	
Title/Position:	
Date survey completed:	E-mail:
Telephone:	Fax:
Please return by **June 1, 2001** to:	Unni Knutsen, National Library of Norway, P.O. Box 2674 Solli N-0203 Oslo, NORWAY Email: unni.knutsen@nb.no

1. Materials under bibliographic control

1.1 Does your country have legislation that requires legal deposit of some or all types of publications?

Yes:		No:	

1.2. For what types of materials published in your country does your institution attempt to provide bibliographic control? (Please indicate if the material is included in the legal deposit regulations in your country)

Types of materials	**Yes**	**No**	**Included in legal deposit**
Books			
Serials			
Maps			
Music			
Sound recordings			
Motion pictures and video recordings			
Graphic materials			
Computer files and software			
Microforms			
E-books			
E-journals			
Other electronic documents			
Pamphlets			
Official publications of your government			
International government publications			
Dissertations			
Conference proceedings			
Textbooks			
Periodical articles			
Other (please specify)			

1.3 Do you have any plans for major changes in the area of bibliographic control and legal deposit within the next five years? Any other comments?

2. The national bibliography

2.1 Do you produce a national bibliography in your country?

Yes:		No:	

2.2 If you do not have a national bibliography at the moment, are there any plans to establish one within the next five years?

Yes:		No:	

2.3 Are there any plans to eliminate the national bibliography within the next five years?

Yes:		No:	

2.4 Are there any plans to make significant changes (content, coverage or frequency) of the national bibliography?

Yes (please specify under Comments)		No:	

Comments

2.5 What type(s) of materials do(es) the national bibliography cover? (Please indicate changes that took place in the 1996 –2000 period and changes you foresee in the next five years)

Types of materials	**Yes**	**No**	**Added(+) or deleted(-) in the 1996-2000 period**	**To be added(+) or deleted(-) before 2006**
Books				
Serials				
Maps				
Music				
Sound recordings				

Motion pictures and video recordings				
Graphic materials				
Computer files and software				
Microforms				
E-books				
E-journals				
Other electronic documents				
Pamphlets				
Official publications of your government				
International government publications				
Dissertations				
Conference proceedings				
Textbooks				
Periodical articles				
Materials about the country published abroad				
Other (please specify)				

Comments

3. The format for publication of the national bibliography

3.1 What are the present format(s) for publication of the national bibliography?

Format of publication	**Yes**	**No**	**Added(+) or deleted(-) in the 1996-2000 period**	**To be added(+) or deleted(-) before 2006**
Print				
Microfiche or similar				
Computer tape				
Floppy disk				
CD-ROM				
On-line access (other than Internet)				
Internet				

Comments

4. National records as an online resource

4.1 Which answer best describes how you make the online national bibliographic records available?

Mixed in as part of the file that includes all records held by our agency	
As a separate file of materials published in our country and held by our agency	
Mixed in as part of a union catalogue of all records held by several agencies	
As part of a union catalogue of materials published in our country and held by several agencies	

Comments

4.2 Have there been major changes in the way you make the national bibliographic records available during the period 1996-2000?

Yes (please specify under Comments)		No	

Comments

4.3 Do you foresee any major changes in the way you make the national bibliographic records available during the next five years?

Yes (please specify under Comments)		No	

Comments

5. Retrospective coverage

5.1 Does/did the online national bibliography have a retrospective coverage programme in order to increase the number of national bibliographical records?

Yes (please specify under Comments)		No	

Comments

5.2 Are you planning a retrospective conversion programme for your national bibliography during the next five years?

Yes (please specify under Comments)		No	

Comments

6. Pricing policy

6.1 Are the national bibliographic records available free of charge?

Yes		No (please specify under Comments)	

Comments

6.2. Are there any changes in the pricing policy for national bibliographic records during the period 1996-2000?

Yes (please specify under Comments)		No	

Comments

6.3 Do you foresee any changes in the pricing policy for national bibliographic records during the next five years?

Yes (please specify under Comments)		No	

Comments

67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	**114-199(WS)-E**
Division Number:	**IV**
Professional Group:	Bibliography
Joint Meeting with:	National Libraries **Workshop**
Meeting Number:	199
Simultaneous Interpretation:	-

Uses and usefulness of national bibliographies : which perspectives?

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Abstract:

After an overview of the development over the last 30 years of national bibliographies in the context of universal bibliographic control, the author considers the evolution of their different components (the materials, the library itself, the automation environment, etc.) and traces the natural evolution toward an online, current national bibliography for traditional materials, even though the very concept of a national bibliographic survey for online items requires complete redefinition.

1. A particular notion of universal bibliographic control

Today, the creation, production, and distribution of official nation bibliographies of current materials are completely integrated into the mission of national libraries. This mission was assigned to them by legal deposit legislation (1), but these laws rarely go into detail about the library technical services means and techniques needed to achieve it. Similarly, on the international level, the library community, and particularly the community of national libraries, has been imbued for almost 30 years with the overarching principles set out by IFLA, that is: universal bibliographic control (2) and universal access to information.

These principles have provided the impetus for the great surge in the creation of national bibliographies, and one might hazard today that the lack of national bibliographic control is never based on a refusal to accept this principle, but rather, on an impossibility, be it economic or structural -- economic in that a capital investment to create a national bibliography will not suffice; it is also necessary to have additional funds, an operating budget each year for regular production and publication, or structural in that a low volume of publishing, poor distribution of publications, or the indifferent application of legal deposit law can prevent a national library from being able to create and foster its national bibliography.

Whatever the reason, and in the vast majority of countries, as shown in the work of Barbara Bell (3), national bibliographies exist that apply as best they can the various international recommendations of 1979 (4) and 1998 (5).

Therefore, in the case of most large national libraries, from year to year their online national bibliography of current materials is made up of records prepared in accordance with the legal deposit requirements of the country in question.

It is distributed in the form of commercial products: the paper version is still quite in evidence, but the CD ROM version, a more recent arrival on the scene, has allowed for the expansion of bibliographic uses of bibliographies because of its greatly increased indexing and searching potential. Similarly, the bibliography is often available in electronic form (ISO 2709 structure) for exchange and for extraction of records by subscription or by request.

2. The major functions of national bibliographies

In applying the principles of universal bibliographic control, national bibliographies have chosen for themselves and respond to specific requirements. In the midst of a publishing and technological context that is evolving quickly, what continue to be the expected uses of a national bibliography and what is the usefulness today of such a descriptive tool and such a product?

2.1 National bibliographies are set out in legal deposit law

Let us note, however, that some countries clearly separate the coverage of legal deposit from that of their national bibliography, doubtless considering that everything added to their collections, and which may be of research value in ten or twenty years, does not require a cataloging record or distribution of the caliber of a national bibliography, so long as it is possible to identify the item, when the time comes, in the catalog of the national library.

2.2 The national bibliography as memory

It has frequently been emphasized that the publishing identity of a country, and thus part of its cultural identity, is conveyed by its bibliographic system, which is both a show-case and a store-house for its cultural heritage. If a certain number of national bibliographies are not produced, even cooperatively, we soon encounter the pitfall pointed out by the participants in the Brighton Conference in 1987 (6), of two-tiered publications: one part which is considered important *a* *priori*, and the other which quickly disappears from view because its cataloging records do not appear in any bibliographic file.

2.3 The national bibliography as information on current publishing

National bibliographies serve to announce new publications. All the same, despite all the progress it has been made in timeliness and completeness, increasingly publishers' and booksellers' practices compete in that sphere, what with the development of an electronic publishing sector (web sites that list new and forthcoming publications, the bibliographic databases of online bookstores, etc.). Official national bibliographies are thus shifting from being the more or less preeminent acquisitions tool to becoming a complementary reference tool for acquisitions: national bibliographies no longer reflect the legal deposit or copyright activity at a particular point in time, but rather reveal a picture of publishing over a specific period. They remain, however, incomparable retrospective research tools by virtue of their richness as comprehensive catalogs. The rapprochement with the commercial sector -- seen as a desirable development in some quarters of the profession in order to establish a single cataloging workflow, but which is often hard going in the traditional (paper) publishing sector -- might it happen more readily in the realm of electronic publishing, and more particularly in online publishing? Projects like BIBLINK at one time, or like the American New Books Project now, inaugurating a kind of CIP of electronic publishing, are vital for the future of library/publisher relations, because the creation of descriptive metadata at the earliest point in creating and producing the document would free catalogers from part of their tasks, thereby permitting them to concentrate entirely on the tasks of consistency of access, that is, on authority work. This is a benefit in terms of the idea of quality which must remain more than ever in the forefront.

2.4 The national bibliography as bibliographic database

The practice of finding and adapting cataloging records is wide-spread. National bibliographies, either alone or integrated into union catalogs, are one of the databases for retrieving cataloging records, either because national libraries distribute their cataloging to strengthen the national library network (in the context of national bibliographic services) or because their cataloging records constitute one of the likely databases (along with private publishers' data files) from which the nation's libraries can search and retrieve records, thus facilitating their collection development and acquisition by subject matter. But the same thing can be said of records in national library catalogs.

Automation and retrospective conversion of card catalogs enhance the role of national bibliographies as memory, but these catalogs are often quite riche in national documentation of all sorts (pamphlets, posters, tracts, publicity brochures, etc.) that is not always captured in current bibliographic surveys. The catalogs of national libraries thus become themselves the national "memory."

2.5 The national bibliography as saleable product

The national bibliography is frequently a product destined more for the foreign than the domestic market. It is the official shop-window for the nation's publishing, particularly for foreign institutions; numerous subscriptions to the national bibliography, in whatever format, are distributed beyond a country's borders. Statistics are generated based on it. It constitutes, more than the catalog itself, the database in which foreign users search. Identified as such, national bibliography records provide access in a number of international databases.

The overall traditional principles concerning the usefulness of national bibliographies are reemerging, as at the beginning of the '70s. Bibliographies give timely information about national publishing; they serve as a reference for acquisitions; their records are used in local catalogs in libraries across the country; or they provide access to the nation's publishing in foreign catalogs, etc. There are of course some changes in how the records are adapted as technologies evolve, but nothing major. The principal difference from the 1970s is that for most countries today, other means exist to promote their national publishing output, or construct a local library catalog by means of copy cataloging, etc., in great part because of the success of the Internet and of web sites which are wonderful links to information. In any case, if this new tool brings about many changes, questions about the usefulness of national bibliographies only make sense if there are other means of electronic reference available. Otherwise, the first priority remains to create and produce a national bibliography regularly.

This evolution without revolution is certainly normal if one takes into account the fact that the raw materials used remains "traditional": the amount of printed and audiovisual materials to be cataloged is still much greater than the number of tangible electronic documents, not to mention online [intangible electronic] documents which for the moment are of concern in a very few countries. However, on the subject of legal deposit, there are many symptoms of accelerating change; should we then find new models or follow traditional paths?

3. Some thoughts on changing context

3.1 The materials

Materials submitted for legal deposit are diverse: without losing any of their numerical significance, printed items are in competition with tangible electronic and multimedia materials; legal deposit now also applies to film, radio, and television; in addition, today there is also an enormous amount of material available only on the Internet and web sites in particular, constituting a new dimension of the national cultural patrimony.

3.2 The bibliography

Bibliographies are becoming richer and are changing: in addition to the obligatory materials that played a central role in the initial recommendations of the '70s (monographs and serials, including government documents), the bibliographic field to be surveyed has not expanded to include numerous kinds of materials, including tangible electronic documents. Moreover, as a documents themselves, national bibliographies have entered the "virtual" age, and several already have online versions.

However, online documents rarely appear in national bibliographies due to their dispensation for the time being from legal deposit requirements in most laws. This new category of material is currently the major focus of national libraries as much for political and economic reasons as for cultural ones. Several recent questionnaires on bibliographic control of electronic online documents already survey national libraries about their bibliographic coverage (7). The principle of acquiring selectively having been accepted on the international level (1st English version. 2000), the most important thing remaining is to define the parameters of selection in terms of contents and typology of sites to collect.

The proliferation of types of formats to be cataloged has sometimes brought with it a multiplying of benefitting institutions depending on the country.

This proliferation only serves to underline the paradox already noted of the descriptive norms for certain printed materials. Certain more or less ephemeral printed materials are sometimes exempted from current cataloging in order to respond in part to the constant concern of catalogers and of users about reducing the time between the moment of legal deposit and the appearance of the corresponding bibliographic record in the national bibliography. This gap between what is legally deposited and what is listed in the national bibliography deserves to be analyzed at the international level, because the library's online catalog becomes a sort of retrospective component of universal bibliographic control where one finds the cultural patrimony in more complete form than in the current national bibliography. However, if the choice of an ever-widening gap between what is deposited and what appears in the bibliography becomes more common, the latter will end up covering only what "professional publishers" themselves have selected and considered to be of value, increasingly on the basis of commercial databases and web sites of new publications; national libraries would only "provide access" to what is retained by all the other libraries. It is thus very important to take care that materials outside mainstream publishing, that is, the most marginal and ephemeral materials, be collected and cataloged, since they will be the primary sources for tomorrow's research. It is this type of material that perhaps argues most strongly for collaboration among libraries in collecting and providing legal deposit cataloging (local and regional newspapers, institutional publications, local and regional administrative publications), including legal deposit registration of the web (local and regional sites, etc.).

3.3 Library automation infrastructure

Finally, the automation infrastructure of libraries is evolving; national libraries have developed their catalogs as vast bibliographic databases in which legal deposit records represent only a part. The national bibliography is thus "virtually" present and can be searched by accessing the subset of the catalog for legal deposit records or by producing an automated file to prepare a product. These production modifications, already examined in this workshop, explain in the IFLA questionnaire (8), the topic this way:

> "Are the online national bibliographic record available:
> - mixed in as part of the files include all records held by our agency
> - as a separate file of materials published in our country and held by our agency
> - mixed in as part of a union catalog of all records held by several agencies
> - on part of a union catalog of material published in our country and held by several agencies"

* * *

This contextual evolution seems to bring along with it two major conclusions on the usefulness and thus the uses of the current national bibliography.

- bibliographic offerings available are much greater and more diverse that they were 30 years ago, and official national bibliographies in the strict sense are really only one of their components along with that of the publishers, booksellers, and large bibliographic utilities (in which they are often integrated). Even though great progress has been made in the timeliness and currency of cataloging, the national bibliography cannot compete in its own country with the commercial sector which produces and distributes cataloging copy more quickly, often based on CIP (cataloging in publication) records.

On the other hand, the national bibliographies are increasingly expanding their role as databases on the national level for extracting records in bulk onto CD ROM, but also on the international level, particularly through large databases like RLG that increasingly include European national bibliographies for example.

- national library catalogs that are in large part computerized have themselves become the favored format of national bibliographies, as much by reason of current cataloging done on line as by reason of the fact, already mentioned above, that the catalogs often contains other national documents not listed in the national bibliography. Machine-readable coding of data will allow for searching the entire "national" database; the same sorting mechanisms can be used to limit the search to the legal deposit records.

These modifications in production seem to have repercussions for the use of national bibliographies. The IFLA survey is not shy about posing the question in radical terms, "Are there any plans to eliminate the national bibliography within the next five years?"

Without necessarily prompting a positive answer as radical as the question, this question does merit consideration. New products coming out in the publishing sector on the one hand, new functionality for large automated catalogs on the other, lead to questions about the methods of distributing a national bibliography.

In some countries, the printed version of the official current national bibliography has already disappeared, but it seems that for some time yet, the cumulative CD ROM issued periodically remains the best tool for extracting bulk data to put together a local catalog and for doing retrospective conversion. Finally, we know that the national bibliography itself is tending to become "virtual" by virtue of its appearance online on the Web. However, it seems obvious that if one can choose whether or not to issue an online current national bibliography for traditional materials, should not all "bibliographies" of virtual documents be on line? Does that mean that bibliographies remains necessary?
Let us consider these two aspects:

4. A national online bibliography of traditional materials and tangible electronic resources

For national bibliographies as for catalogs, mounting them on the Internet in recent years has been the real change resulting in almost immediate access to bibliographic records and their "universal" distribution.

Mounting current national bibliographies on the Web can thus be examined from the point of view of their production or of their distribution.

4.1 Production

Producing current national bibliographies by mounting them on the Web necessitates a changes in cataloging format (moving from MARC to HTML for example). There would scarcely be any reason in this case only to do the same for legal deposit records: current national bibliographies are a part of the catalog, and all enhancements in functionality of the catalog automatically affect that of the current national bibliography as well.

4.2 Distribution

As for distribution, mounting on the Web has its parallel in the production, that is to say, online cataloging in the catalog, followed by selection and downloading, and then conversion into one of the Web formats.

This is a very satisfactory way of shortening the time lag between the publication of an item and the appearance of its bibliographic record, where official national bibliographies can never match the timeliness of publishers' announcements. The speed with which the records are available [via the Web] strengthens the informational use of [national] bibliographies.

Distribution done in this fashion allows for maintaining a **frequency** consistent with the idea of a "current national bibliography" and obviates the costs of printing and postage inherent in a printed publication.

- Mounting the national bibliography on the Web brings up the problem of its **longevity**. But this major problem (if the bibliography is memory, this memory must be carefully preserved) is, or will be, resolved at the same time as the archiving and long-term preservation of electronic documents – a problem tackled in the European NEDLIB project for example. And, absent a solution to the longevity issue, retrospective and cumulative archiving on CD ROM is always possible.

- Furthermore, the arrival of national bibliographies on the Web, and of catalogs as well, has led to consideration of the "commercialization" of libraries' bibliographic data. As we know, all libraries have opted for **free searching** of their cataloging records on the Web and have decided only to require payment for the value added by the institution, that is to say, for services and products: downloading records and CD ROM production. These principles hold good for national bibliographies as well, which are thus free on the Web and available by paid subscription on CD ROM, for example.

The greatest advantage of this new method of distribution is a guaranteed opening up to the world, which has the real possibility of making the [published] production of each country better known; the [Web] network by itself serves as a guarantor of efficient universal bibliographic control. The remaining disadvantage – that use of the Web is not wide-spread in every country – is temporary.

4.3

In both cases, it is necessary to arrange a link-up with the **retrospective part** [of national bibliographies] and even in the same way as it is being done for the catalog, **to "enrich" current national bibliographies** with direct links to all or part (table of contents) of the item itself. In the case of current national bibliographies, the links possible from catalogs to an uncopyrighted documents are prohibited by the legal issues of protecting authors' and publishers' rights. If it is tempting to wish for other kinds of access to "traditional documentary objects," for example, a national bibliography of prints, "illustrated" by small reproductions of each print cataloged, seems hard to implement, at least in the old Europe, except by obtaining authorizations one by one.

And so, in terms of their usage, putting national bibliographies on line doesn't obviate the need for a manual or an online users' guide: obviously, it's not the searching strategy that needs to be explained (interface design should suffice for that), but rather the extent of their coverage. Without it, a user, even a professional [librarian], will have as much difficulty in 2001 as during the '70s in knowing the real content and the cataloging context of the material in national bibliographies. All of which returns us to the observation that was made at the ICNBS conference in 1998: "The user practically never finds any explanation of what is included and what isn't, nor of 'who does what in the area of collection development and cataloging for the entirety of materials and formats' in a given country; the usage statements to accompany national bibliographies that were recommened in 1977 were never issued. This recommendation must be reaffirmed and reinforced. In fact, whatever the medium for distributing national bibliographies, including CD ROM, the absence of this information hampers its uses" (5). This is obviously true for online bibliographies.

5. Online bibliographies for online documents?

As we all know, the modalities for legal deposit of online services (web sites) is one of the major issues confronting national libraries today.

Only a few countries have already instituted it, and two procedures exist to carry it out: the automatic scanning of the Web, a snapshot of a particular moment in time, and voluntary registration in tangible form of a selection of sites held by the library in a more document-oriented file.

This is not the place to develop technical solutions; suffice it to say that it is necessary to pay attention to their normalization and inter-connectivity, but having determined the acquisitions principle, what is the principle of bibliographic control? The new laws like the old ones are silent on the characteristics of an eventual bibliographic treatment [of these deposits].

The "territoriality" that governs the scope of the majority of bibliographic surveys in current national bibliographies for traditional materials will have to be redefined (how will it [territoriality] apply to a Web site, "in essence" international).

On the other hand, one of the roles of a bibliography is to furnish the legal deposit record with a real identity card which allows it to be distinguished from the record for another edition of the same item. The fact that a bibliography is on line does not change the equation; the fact that the document described is electronic doesn't either. All the same, considering that the very notion of legal deposit for a document as dynamic and changeable as a web site is paradoxical, and that any legal deposit will freeze or fix the document at the time of the deposit (whether by means of a periodic mechanical sweep or by voluntary deposit of the file by FTP for example). One must accept that one is no longer describing a finished product, but rather the state of the document at a given time. This has the effect of multiplying the number of "continuing resources" These "publications in series" on the Internet. The idea of bibliographic description thus favors access points in terms of authority metadata. To go a step further, one could find disconcerting the idea of gaining access to a document by locating its bibliographic record, which record is tied to the document by a hypertext link, so that the document could be consulted at the same time. Considering the overall concepts of universal bibliographic control and UAP, one could reflect over time on the fact that identification of a document is made by visualizing it and rather than by describing it completely. This brings back into perspective the role of ISBD description, the pillar of bibliographic descriptions (already under threat because of data formatting), and that of access points controlled by authority records. These normalized access points, managed by authority files, are more indispensable than ever, and the creation of authority metadata should, in the recommendations, be tied more tightly than ever to the creation of bibliographic registration within the national bibliography. Author/title authority files could thus be one of the referents for managing digital materials, while Web search engines could be applied to controlled indexing metadata, managed by subject authority files. This would be a means of reinforcing and prioritizing information actually useful to users available in national bibliographies in an electronic environment.

Once can imagine continuing on a very limited scale to "catalog web sites" in a format adapted to allow for recording the URL of the site and producing for this limited selection of sites a description more reminiscent of a Web bookmark than of a bibliographic record, with direct access to the site, confirming the tendency these days to transform bibliographic catalogs into catalogs of web resources. However, faced with the quantity of information gathered in the automatic sweep, no cataloging is possible unless it is done automatically. It will be necessary to go back to the publishers and to BIBLINK to have them create the necessary metadata (DUBLIN CORE) at the very earliest stage and integrate it into their home pages (or into each page, depending on the degree of granularity chosen), and especially to have them make as much use as possible of search engines to be able, for example, (thanks to the work done by librarians on indexing data) to select and post the latest sites in the area deemed "national."

In the case of voluntary legal deposit, it is also possible to imagine making registrations at intervals in order not to compete with web sites under development. Current national bibliographies would become in fact retrospective, at least in terms of how they were used.

- the change will come, therefore, with the timely automatic production of bibliographies of online documents and web sites by extracting metatdata (created by publishers and authors) and through direct access to the site, once the legal issues of protecting authors' rights have been resolved (national libraries will need to find solutions to these questions).

* * *

Are the principles of universal bibliographic control still relevant when the notion of access to the document and to information is so turned upside down by the changes in the object itself that must be acquired and made accessible? Are these principles still applicable as we enter a century which will no doubt bring a reversal of the relative positions of "other formats" (non-book materials [in the text]) and paper [materials], and the increasing intangibility of information carriers? We cannot talk about the chaos of no universal bibliographic control or national bibliographies, but the evolution of the concept does not render it obsolete, just as the evolution of materials to be cataloged does not take away the importance of national bibliographies.

For several decades more, thanks to national bibliographies on the Web, traditional materials will have a new visibility from every direction which will constitute the new universal bibliographic control of the 21st century; one or several portals managed by international documentary agencies will facilitate interesting combinations, the GABRIEL site for example, for European libraries under the auspices of CENL.

Soon on the other hand, as new legal deposit legislation is enacted that takes into account the registration of online documents and services, national libraries will be confronted with the problem of how to the formulate the records for these deposits, and will have to have investigated among others, questions relating to the use of search engines and the coherence of search results, of metadata and the extraction of metadata, Web addresses, the volatility of URL addresses, etc. To handle the legal deposit of these new documents and Web services, the very concept of a national bibliographic survey must be revisited. The COBRA group at CENL seems to be taking an interest in this issue.

A new edition of the guide to legal deposit legislation (1) has just been published. It is now time to think about revising the 1979 recommendations (4) on bibliographic agencies and national bibliographies, so long as we are sufficiently explicit that a real international consensus can emerge in the context of the Internet.

What a great challenge for IFLA and for national libraries!

NOTES

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6. - *Proceedings of the National Bibliographies Seminar*. Brighton, 18 August 1987 held by under the auspices of the IFLA Division of Bibliographic Control / ed. by Winston Roberts. – London : IFLA UBCIM, 1988

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■■■

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Legal Deposit of on-line materials and National Bibliographies

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Listening to our speakers today there can be no doubt about the role and value of national bibliographies. The challenge is to convince funding agencies that a national bibliography is a fundamental tool that if adequately supported can really contribute to the cultural development and economic growth of a country.

A basic building block to achieving a truly comprehensive national bibliography is to ensure that all the publications of a country are included. An important tool to help achieve comprehensiveness is legal deposit. In the preface to the recently published revised edition of the *Guidelines for Legal Deposit Legislation,* I said: " the role of national libraries in ensuring universal and equitable access to information continues to be a cornerstone in the development of a knowledge society. A national library faces many challenges in ensuring that the published heritage of its country is acquired and preserved for all to use. An important vehicle in assisting national libraries meet this responsibility is legal deposit." Most countries do rely on a legal instrument of some sort in order to ensure the comprehensiveness of their national deposit collection.

In 1981, UNESCO published a study prepared by Dr. Jean Lunn from Canada entitled *Guidelines for Legal Deposit Legislation*. Interestingly enough this study resulted from a recommendation of the 1977 International Congress on National Bibliographies held in Paris. The idea was to develop model legislation which would assist countries in preparing their specific legislation and which would, and I quote, "serve as a basis for Member States in attaining national bibliographic control." This work served the community well for a number of years, but as Dr Lunn's guidelines primarily studied the issues in relation to print material it became increasingly evident that the *Guidelines* needed to be revised. In spite of regular discussions about this need at meetings of the Conference of Directors of National Libraries and their excellent study on *The Legal Deposit of Electronic Publications*, it took a recommendation from the Second International Conference on National Bibliographic Services held in Copenhagen in 1998 for an actual process of revision to start. The result is an UNESCO document, published in 2000 *Guidelines for Legal Deposit Legislation* by Jules Lariviere, also from Canada. The major difference in this enlarged and updated work is inclusion of digital publications. It should be noted, though, that Dr. Lunn's work did refer to machine- readable data files. Even if she only devoted seventeen lines to this new format, it was clear even then that it would be a future issue for legal deposit.

It is probably obvious that this short presentation is really a commercial and what I am hoping is that you will all rush out and acquire a copy of these Guidelines.. While they are not exactly bedtime reading, unless you want to fall asleep quickly, I do recommend the Guidelines as an excellent reference guide to many issues relating to legal deposit legislation. Except for the few countries that have revised their legislation during the past few years it is probably safe to say that the legal deposit legislation of most countries does not adequately provide for the complex and fast moving world of digital technology and on-line publications. I might add that my own country, Canada, is in this latter group, although I know that work is underway to update the appropriate legislation.

Today what I would like to do is highlight some of the issues and the recommendations relating to digital formats. To begin with, the general theory of legal deposit is, and I would like to quote from the *Guidelines* , "any type of library material, so called to differentiate it from archival material, should be an object of legal deposit as long as it is made available to the general public and produced in multiple copies." It is this last clause which gives rise to many questions concerning online publications because in this environment there is probably only a single copy stored on the server of the author/publisher.

There is not enough time here to go into all the technical or legal possibilities of implementing legal deposit for on-line digital materials but there are six pages in the revised Guidelines, which raise a number of issues and suggest a possible solution, i.e., a combination of deposit and a form of licensing. Most importantly though, the *Guidelines* state quite clearly that online materials should be subject to legal deposit. It is essential that the role of national libraries to acquire and make known through national bibliographies, to preserve and to provide access to the published heritage of a country, in whatever format, be maintained in this new electronic environment.

At a minimum, two conditions will be required in order to find an acceptable solution. One is some creative technological support to allow controlled access in the electronic environment; and, second, and perhaps the most important, a degree of trust between publishers and the library community. The first problem is one of priorities and funding. The second is more difficult. Over the years the tensions between producers/publishers and the library community (on behalf of users) has waxed and waned; but, in the long haul, we did reach a mutual understanding about the need for a balance between the rights of the producers and the needs of users. With the advent of information in an electronic format, it will not be enough for me that national libraries or national bibliographic agencies acquire these new formats and then have to stop once they have made them known and ensured preservation. This would be like reverting to a monastery library. As more and more electronic online publications are produced, the challenge of acquiring, making known, and preserving them will increase. The only way that funding agencies are going to support the important role of the national library in this new era is if there is a corresponding public good, such as access for all citizens which is strongly promoted and accepted.

I am going to close with a rather long quote from the Guidelines, which I feel, sums up the present situation quite well:

> "Before legal deposit of on-line electronic publications becomes fully implemented in most countries, there are still a number of technical problems to be resolved and legal issues to be clarified. But it is important for any country wishing to include electronic publications in its legal deposit scheme to make sure that the appropriate legislation is properly amended, even if the scheme would not be fully operational. As with copyright legislation, legal deposit legislation within the electronic environment should be the result of a compromise based on the balance of rights between citizens and publishers. Whereas including a provision for unlimited free access for the users of a national legal deposit institution would be abusive, not providing at least one access to the registered users of such an institution would be as unreasonable."

Thank you

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Improving Interoperability of Interlending and Document Delivery Systems

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Abstract:

This workshop, sponsored by the Section on Document Delivery and Interlending, will begin with a brief presentation, in non-technical terms, on the international standard for ILL communication, the ISO ILL Protocol. The main portion of the workshop will feature demonstrations by six vendors of how messages are exchanged. The workshop will conclude with an opportunity for participants to talk with the vendors about their ILL systems.

An international standard for interlibrary loan (ILL) communication was approved by the International Organization for Standardization (ISO) in 1991. This standard, the ISO ILL Protocol (10160 & 10161), permits libraries to exchange ILL requests electronically by defining the format, content, and structure of the ILL request and responses used in an ILL transaction. The Protocol enables two libraries, using Protocol-compliant software from different vendors to exchange ILL transactions.

Introduction

This workshop, sponsored by the Section on Document Delivery and Interlending, will begin with a brief presentation, in non-technical terms, on the international standard for ILL communication, the ISO ILL Protocol. The main portion of the workshop will feature demonstrations by six vendors of how messages are exchanged. The workshop will conclude with an opportunity for participants to talk with the vendors about their ILL systems.

The ISO ILL Protocol is an international standard for interlibrary loan communication. I will provide a brief overview of the standard in non-technical terms, discuss what this standard is designed to do and not do, and explain why the standard is important for librarians. I will conclude by exploring how the standard offers the potential for librarians to request materials from libraries in other countries, thus improving international document delivery and resource sharing activities.

We have a handout that includes information on the six vendors demonstrating today. In my presentation, I will use the phrase "interlibrary loan" to describe the requesting and supplying of books and microfilm reels, as well as the supply of photocopies of journal articles, articles in conference proceedings, etc. Some librarians in the U.S. use the phrase "document delivery" to describe the requesting of photocopies, but I will use the more general and inclusive term.

Standards for ILL

What are the standards that will improve ILL communication among libraries? At least three are directly relevant:

1) Z39.50 for searching (also known as ISO 23950);
2) ISO 10160 & 10161 for sending ILL requests; and
3) MIME, FTP, HTML, and GEDI for sending documents.

I will focus my talk on the second standard: ISO 10160 & 10161, more commonly known as the ILL Protocol. ISO is the abbreviation for the International Organization for Standardization, a world federation of national standards organizations. ISO has published many well-known library standards, including:

International Standard Book Number (ISBN)
International Standard Serial Number (ISSN)
Unicode
Bibliographic Information Interchange on Magnetic Tape
Codes for Representation of Names of Countries

The ISO ILL Protocol

The ISO standards that most directly relate to interlibrary loan are ISO 10160 and 10161. There are actually three parts to the ILL Protocol, but these three parts are referred to as the ISO ILL Protocol. The three parts are:

10160: 1997 Information and Documentation – Open Systems Interconnection – Interlibrary Loan Application Service Definition

10161-1: 1997 Information and Documentation – Open Systems Interconnection – Interlibrary Loan Application Protocol
Specification

10161-2: 1997 Information and Documentation – Open Systems Interconnection – Interlibrary Loan Application Protocol
Specification -- Protocol Implementation Conformance Statement (PICS) Proforma

All three documents are very technical documents that use specific terminology required by international standards. These standards are aimed at commercial vendors and technical experts, not interlibrary loan librarians. To oversimplify, 10160 describes the process of an interlibrary loan transaction, 10161-1 describes how a structured set of messages are to be coded, and 10161-2 is a document used to evaluate how well an ILL system that claims to be Protocol-compliant actually conforms to the official standard.

The Development of the Standard

The second edition of the ISO ILL Protocol was published in 1997, thus the year in the reference number. The standard originated in Canada in 1983 when the National Library of Canada (NLC) began working on an interlibrary loan standard for use with a variety of communication services. NLC's work on the ILL Protocol was approved as a Canadian National Standard in 1989 and approved as the ISO standard in 1991.

Overview of Protocol

I will now provide an overview of the ISO Protocol and describe several key features. A Protocol is a set of well-defined rules and procedures that specifies the information that needs to be exchanged and how that exchange is completed. The Protocol governs system-to-system communication; the Protocol does not regulate requests send via the post. The words "Protocol" and "standard" are basically interchangeable, though there are some minor technical differences in their meanings, which I will not explain today.

It is important to remember that the ILL Protocol governs behavior between ILL systems, not within an ILL system. By ILL systems, I mean messaging systems such as OCLC, RLIN, and DOCLINE in the U.S., PICA in the Netherlands, British Library Document Supply Centre's ARTTel, or SUBITO in Germany. For example, when these ILL systems implement the ILL Protocol it will possible to send an ILL request from OCLC to PICA, or from SUBITO to RLIN. Implementation of the Protocol by the Research Libraries Group (RLG) and OCLC have enabled libraries to pass a request from one system to another, and for users of RLG's ILL Manager to communicate with libraries using RLIN or OCLC.

Messages, Format, and Sequence

The ISO ILL Protocol defines what messages are to be exchanged, the format of those messages, and the sequence in which they are exchanged. Let's examine each of these phrases in some detail.

First, the Protocol defines what messages are to be exchanged. The messages include the initial request, which is the automated equivalent to one ILL department mailing an ILL form to another library. Other messages include a renewal request to keep the book for a longer period of time, a notification that the book is overdue, and a report that the book has been returned. The Protocol defines 21 such messages, many of which are generally not used in a normal ILL transaction.

Second, the Protocol defines the format of those 21 messages. The message format can be viewed as the equivalent of the content of the paper form mailed to the other library. The form includes information about your library, bibliographic information about the book or article, and information about special requirements such as the amount you are willing to pay or the date by which your patron needs the book or article.

Finally, the Protocol establishes the order in which messages are send. For example, the first message in this sequence is the ILL request, followed by messages that indicate that the lending library has shipped the book, the borrowing library has received the book, the borrowing library has returned the book, and the lending library has checked that book in. The Protocol does not permit the borrowing library to ask for a renewal if they have already returned the book. The sequence of the transaction follows very closely the normal sequence of what occurs when paper forms are exchanged.

These messages, format, and sequence are critical because the Protocol assumes that the borrowing and lending libraries each maintain a copy of the transaction. This is quite different from some of the online ILL messaging systems in which the borrower and lender each view and update a single copy of the transaction. The Protocol also assumes a distributed e-mail environment rather than a centralized system.

Roles

Te ILL Protocol encompasses a range of complexity of ILL transactions from the most basic in which two libraries exchange a book to one in which one library places ILL requests for another library and the request is forwarded by one potential lender to another. The library can play three roles in this process:

1) requester (the borrowing library)
2) responder (the lending library)
3) intermediary (for example, the central public library placing requests for patrons of a branch library)

ILL departments generally perform functions as a borrower or a lender, therefore can be a requester or responder in Protocol terms. A library that serves as an intermediary may also be a requester and/or a responder. Thus, the roles are not exclusive to one library.

The Protocol defines types of transactions as simple, chained, or partitioned. A simple transaction occurs between two libraries. A chained transaction is one in which, for example, the central public library sends requests for their branch library to one or more potential lenders. A partitioned transaction is one in which the central library sends the request to the potential lender, but all follow up communication is between the branch library and the lender.

Service Types

The Protocol supports five types of requests:

1) Loan: a request to borrow a book;
2) Copy/non-returnable: a request for a photocopy of a journal article;
3) Locations: a request for a list of libraries that own the needed title;
4) Estimate: a request for the amount the lender charges to lend a book or make a photocopy; and
5) Responder-specific: a request for a service unique to the lending library.

Most of the ILL requests are for the first two: request to borrow a book, or asking for a photocopy of a journal article, and those are what we will be highlighting today.

Communication Options

Because the ILL Protocol is a communications standard, the Protocol includes detailed information about the rules to encode data. This is one of the most complex areas of the Protocol, and I will not go into great detail other than to say that the Abstract Syntax Notation - One (ASN-1) is used to specify the data, BER (Basic Encoding Rules) is the required encoding scheme.

Protocol Versus Application

In order to understand what the Protocol does and does not do, it is important to understand the different between the Protocol and an ILL application. The six vendors demonstrating today all have developed software to send messages as well as track other aspects of the ILL process. I encourage you to talk with the vendors present about their products.

In overly simplistic terms, you can think of the Protocol as the equivalent to the mailing of request forms to potential lenders and the subsequent communication with that lender. The application is everything else: your internal paper files, the tracking of current and completed ILL borrowing and lending requests, the tracking of copyright compliance, and the preparation of statistics and reports.

What the Protocol Does

I have given you a very general overview of a very technical and detailed standard. Librarians using ILL messaging systems that use the Protocol do not need to know the details of the Protocol, but rather what the Protocol will permit them to do. I will use the phrase "Protocol-compliant system" to describe any product that uses the ISO ILL Protocol to send and receive ILL requests. I will describe what Protocol-compliant systems will do and then list a few things they do not do.

First, Protocol-compliant systems send and receive ILL requests to other Protocol-compliant systems. The Protocol facilitates electronic, online communication between different systems, regardless of hardware or software used by each system. By standardizing the messages and content of the messages, the Protocol provides information in a format that can be understood by the other components of the software that track statistics, generate reports, or archive completed transactions, etc.

What the Protocol Does Not Do

A Protocol-compliant system does not govern requests sent via the mail or post. The Protocol does not guarantee that a library will be able to communicate with all other libraries or ILL systems in the world. A Protocol-compliant system may be able to send ILL requests to non-compliant ILL system, but only because it uses non-compliant communication software to exchange messages.

For the near-term future it is unlikely that all requests will be sent via software using the Protocol communications. Thus, separate files may need to be maintained to track Protocol and non-Protocol messages. Until there is a critical mass of users of Protocol-based systems, ILL managers will need to use multiple methods to send and receive ILL requests.

The Protocol does not capture statistics, but provides the fields on which statistics may be counted. The Protocol does not prepare annual reports, but again provides transaction-specific data from which the reports can be generated.

The Protocol does not guarantee that books will be loaned or photocopies supplied. The policies of the lending library govern what may be supplied; a Protocol-compliant system simply guarantees that the ILL request will be read and understood.

Finally, the Protocol does not guarantee that internal workflow will be improved or that libraries will save money using Protocol-compliant systems. ILL departments using software that incorporates Protocol messaging capabilities will still need to evaluate how existing manual procedures can be replaced by the software.

Why the Protocol Should be Important to Librarians

In our increasingly global society and with library catalogs around the world accessible via the Internet, ILL librarians are looking beyond their own county for potential lenders. At present, the only way an ILL librarian in the U.S. can send an ILL request to a Danish library is to mail a paper form, fax that paper form, or possibly send the request via free-form email. Rather than requiring all libraries in the world to use one automated ILL messaging system, the Protocol permits libraries around the world to send and receive ILL requests in a format that can be understood by a variety of recipients. However, the Protocol does not translate languages, so if a U.S. library received a Protocol message from a Danish library, and the request was in Danish and not English, staff in the U.S. ILL department would need to translate the Danish to understand what was being requested.

Current Implementations

For most of the 1990s, implementations were limited. Several tests were undertaken, but few libraries used the Protocol to send and receive ILL requests. But the end of the decade, at least a dozen vendors were actively developing Protocol-compliant systems. We will have demonstrations of six of the 40+ vendors who are participating in the Interlibrary Loan Protocol Implementors Group – the IPIG.

The Association of Research Libraries tracks the status of testing between and among vendors. Current information may be found at: http://www.arl.org/access/naildd/ipig/res/ipig9801-stat-test.shtml.

Implementation Barriers

Several important barriers still remain to widespread implementation. First, we cannot assume that all libraries have the ability to send requests electronically. Access to the Internet and electronic mail is still a dream for ILL departments in many libraries around the world. Although they may wish to use the international standard, if they do not have a computer or access to communication networks, ILL librarians will not be able to use the ILL Protocol.

Second, many existing national ILL messaging systems are not currently Protocol-compliant, which minimizes international sharing. Managers of those ILL systems may not realize how continuation of proprietary communication software may actually inhibit interlibrary loan activities and reduce use of their systems rather than increase use.

Third, use of the ILL Protocol assumes use of systems or software that use the Protocol for the communication portion of the transaction. Many libraries in the U.S. use management software to track OCLC requests, but at present, that software cannot accept Protocol formatted messages. Thus, there is less incentive to use libraries that can send requests directly to the library that owns the item and greater incentive to continue to use proprietary messaging systems such as OCLC.

Implementation and use of the ILL Protocol will not solve all of the barriers of national, or international, interlibrary loan, but use of Protocol-compliant systems removes one major barrier to more effective communication between libraries.

Concluding Thoughts

I would like to conclude by looking at what will the next five years might bring. It is always dangerous to predict the future, but I would like to present three realistic possibilities.

First, there will be increasing pressures for effective international interlibrary loan. The establishment of ARL's Global Resources Program is one indication that even the largest libraries in North America are no longer able to build individual collections but must turn to interlibrary loan and resource sharing to meet local demands. The cost of journals, the explosion in publication volume, and increased access to published materials continue to place pressures on libraries to own materials, and to provide access to materials not locally owned.

Second, there will be increased competition among current providers of online ILL systems to implement the ISO ILL Protocol. We have six vendors demonstrating today, and others will follow.

Finally, although widespread implementation of the international standard for ILL communication will be slower than desired, the potential for sharing of materials via the global network is promising. The use of existing international standards in combination with new technologies and new concepts of interlibrary loan offers the potential for libraries to become key participants in the 21st century society.

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Improving Z39.50 Interoperability: Z39.50 Profiles and Testbeds for Library Applications

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Introduction

An operating assumption for the networked environment is that many different information systems need to interoperate for users to successfully discover and retrieve distributed resources. Meaningful interoperability is often elusive. In the library community, the Z39.50 standard protocol (ISO 23950/ANSI/NISO Z39.50) for information retrieval promised seamless and transparent networked access to library resources. Too often, the reality has not lived up to the promise. This paper discusses two efforts that offer solution paths to Z39.50 interoperability.

Interoperability and Z39.50

From its inception in the early 1980s, the goal of the Z39.50 protocol was to enable interoperable system-to-system communication for purposes of information retrieval. (See Moen [1998] for a history of Z39.50 development.) The developers of the standard envisioned its use as a point-to-point protocol where an origin/client would interact with a target/server to search databases of MARC records. That model is still the foundation of the protocol, but current Z39.50 implementations and applications now provide for searching multiple targets and databases concurrently. And the use of Z39.50 is no longer limited to searching bibliographic databases of MARC records. The protocol is a key technology for networked information retrieval.

Interoperability between implementations of Z39.50 has been, and continues to be, a challenge. One of the reasons for the slow progress towards meaningful interoperability is that interoperability is not just one thing. Often, interoperability is presented as a monolithic entity, but in fact, there are many types and levels of interoperability. Miller (2000) provides an expansive definition of interoperability and indicates some of the types. There are multiple factors that can affect information system interoperability (Moen, 2001b). Our understanding of the complexity of interoperability has increased, and we are able to better pinpoint our efforts in addressing and resolving interoperability.

For example, issues of Z39.50 interoperability can be categorized into syntactic protocol interoperability, functional protocol interoperability, and semantic interoperability (Moen, 2001a). By identifying these categories, we are better able to highlight specific interoperability issues and begin to propose solutions.

Implementors and users of Z39.50 have recognized that two "Z39.50 compliant" systems don't necessarily interoperate well (or at all). This happens in part because of the rich functionality available in the optional services and specifications available in the protocol. Unless both systems are configured similarly in terms of choices from the protocol, interoperability suffers. The emergence of Z39.50 profiles provides the solution path to address more detailed specifications for Z39.50 clients and servers to improve interoperability.

Z39.50 Profiles

Profiles are an auxiliary standards mechanism and define a subset of specifications from one or more standards to improve interoperability. One objective of a profile is to detail a set of specifications from those options and choices in a base standard. Implementations conforming to a profile have an improved likelihood of interoperability.

Since the mid-1990s, groups using Z39.50 have developed a number of Z39.50 profiles. The motivations for developing Z39.50 profiles can be categorized as either:

- Prescribing how Z39.50 should be used in a particular application environment (e.g., government information, cultural heritage museums, etc.)
- Solving interoperability problems with existing Z39.50 implementations within a community (e.g., libraries) or across two or more communities (e.g., library and museums).

Examples of the first category are the Application Profile for the Government Information Locator Service (GILS) and the CIMI Profile: A Z39.50 Profile for Cultural Heritage Information. (See Z39.50 Maintenance Agency [2001] for a complete listing of Z39.50 profiles.)

This paper focuses on the use of profiles in the second category, and an important example of those Z39.50 profiles for library applications is the Bath Profile: An International Z39.50 Specification for Library Applications and Resource Discovery (The Bath Group, 2001).

The Bath Profile

During the late 1990s, many different national, state, and project groups developed Z39.50 library application profiles to address very similar problems. Unfortunately, these profiles required different Z39.50 specifications for similar client and server behaviour. In 1999, a group of those profile writers and other Z39.50 implementors met in Bath, England to agree on a core set of specifications that addressed international requirements and thus serve as a common core for other national, state, and project library application profiles (Lunau, n.d.).

The Bath Profile is an Internationally Registered Profile first released in June 2000. The profile's purpose is to:

> … identify those features of the Z39.50 standard that are required to allow effective use of Z39.50 software in a range of library applications, including search and retrieval of bibliographic data from library catalogues; transfer of holdings information; cross-domain searches between libraries, museums and archives; updating union catalogues; item ordering and document delivery.

The current version of the Profile identifies specifications for three applications:

- Basic bibliographic search and retrieval, with primary focus on library catalogues
- Bibliographic holdings search and retrieval
- Cross-domain search and retrieval.

To accommodate future extensions to the profile, and to allow an implementor to choose to support one or more applications specified in the Profile, the structure of the document is modular. Functional Areas respond to a specific set of requirements. The three applications listed above are three separate Functional Areas in the Profile. An implementor could choose to support only Functional Area A: Basic Bibliographic Search and Retrieval, with Primary Focus on Library Catalogues, and be compliant with the Profile. To reduce barriers to entry, the Profile also specifies different Levels of Conformance. Level 0 specifies minimum but meaningful Z39.50 specifications to improve interoperability. Higher levels of conformance have additional requirements.

A discussion of Functional Area A can illustrate the structure and content of the Profile. Functional Area A addresses the need to improve interoperability when doing basic bibliographic searching across library catalogues. Level 0 requires clients and servers to support four specific searches:

- Author Search – Precision Match for Established Name Heading
- Title Search – Keyword
- Subject Search – Keyword
- Any Search – Keyword.

Level 1 adds 15 searches. Thus an implementation claiming conformance at Level 1 must support at a minimum the 19 searches identified in the Profile.

For each search, the Profile indicates the behaviour of the Z39.50 client and server and the functionality needed in the underlying information retrieval system. It then specifies the exact Z39.50 attribute combination to express a particular search. The following two searches illustrate these specifications:

Level 0 Title Search — Keyword

Uses: Searches for complete word in a title of a resource.

Attribute Type	Attribute Values	Attribute Names
Use (1)	4	title
Relation (2)	3	equal
Position (3)	3	any position in field
Structure (4)	2	word
Truncation (5)	**100**	**do not truncate**
Completeness (6)	1	incomplete subfield

Level 1 Title Search — Keyword with Right Truncation

Uses: Searches for complete word beginning with the specified character string in fields that contain a title of a resource.

Attribute Type	Attribute Values	Attribute Names
Use (1)	1	title
Relation (2)	3	equal
Position (3)	3	any position in field
Structure (4)	4	word
Truncation (5)	**5**	**right truncation**
Completeness (6)	1	incomplete subfield

The differences in the semantics of the expected behaviour are reflected in the use of different attribute combinations. Specifying an exact attribute combination for every search in the Profile reduces the ambiguity when a client sends a query to a server. A Bath conformant server knows exactly the type of search being requested when it receives a query with a specific attribute combination. This is a vast improvement over current practices of Z39.50 clients and servers, and has the potential to substantially improve the semantic interoperability for searching.

The Profile also addresses the retrieval aspect of Z39.50. A client and server must interchange a record in a syntax recognized by both. Therefore the Profile specifies which Z39.50 Record Syntax(es) must be supported. In Functional Area A, the Profile requires clients and servers to support a combination of MARC 21 and UNIMARC along with at least one non-MARC syntax (e.g., XML).

Since browsing indexes is an associated requirement for searching, the Profile specifies the use of the Z39.50 Scan service in Level 1. Six Scans are specified and must be supported by clients and servers that claim conformance at Level 1 of Functional Area A.

These examples give a sense of how the Profile specifies the use of Z39.50 for search and retrieval across library catalogues. The Profile offers a similar level of specification for the other Functional Areas related to bibliographic holdings information and cross-domain search and retrieval.

In summary, the Bath Profile addresses requirements for international interoperability and identifies Z39.50 specifications to support those requirements. The Bath Profile provides choices from the Z39.50 standard and specifies exactly what and how Z39.50 clients and servers must support those choices. Similarly configured clients and servers will lead to improved interoperability. For additional information about the Bath Profile, see the Bath Profile Maintenance Agency (2001).

Extending the Bath Profile

The core specifications in the Bath Profile provide a common ground for international interoperability. The Bath Profile assumes that other national, state, and project profiles will respond to more specific requirements and extend the core specifications to address those requirements. Companion profiles use the Bath Profile as a foundation and add appropriate specifications to respond to their local needs. Two examples of this are the ONE-2 Profile and the NISO Profile.

The ONE-2 Profile (1999) is being developed as part of the OPAC Network in Europe 2 project. The ONE-2 Profile uses the Bath Profile as a subset of its specifications. In addition to the Bath Profile

Functional Areas, it adds specifications for Ordering and Interlibrary Loans, Union Catalogue Update, and Server Information (ExplainLite). The ONE-2 Profile is to be completed in Summer 2001.

The U.S. National Information Standards Organization (NISO) established a standards committee in Fall 2000 to develop a U.S. National Z39.50 Profile for Library Applications (National Information Standards Organization, 2001). As of Summer 2001, work on this profile is underway. The first version of the U.S. national profile includes the two Bath Profile Functional Areas related to searching library catalogs and interchanging holdings information. The profile extends the number of searches defined in the Bath Profile Functional Area A. The U.S. national profile is being developed through NISO's normal standards development procedures. The result will be a U.S. National Standard that addresses national requirements while using the Bath Profile core specifications as its foundation.

Implementation experience in recent years has indicated the need for more detailed Z39.50 configuration specification to improve interoperability. A framework for improving interoperability in library applications is now available. The Bath Profile provides a core set of specifications that responds to international Z39.50 requirements. Companion profiles that use Bath as their foundation preserve interoperability at the international level while addressing specific national, state, and project requirements.

Now that we have more detailed specifications for configuring Z39.50 clients and servers, we have an opportunity for establishing testing scenarios to assess conformance to the profiles.

A Z39.50 Interoperability Testbed

Except for an early interoperability testbed in 1992 when Z39.50 was in its infancy, there has been no formal testing environment to assist implementors in improving interoperability (see Lynch [1992] for a description of the 1992 testbed). In Fall 2000, the U.S. federal Institute of Museum and Library Services (IMLS) awarded a National Leadership Grant to the University of North Texas for a research and demonstration project to establish a Z39.50 interoperability testbed. Partners in the project include OCLC, SIRSI, and Sea Change/Bookwhere who are contributing data, software, and expertise (for information on the project, see Moen, 2001c).

Realizing the Vision of Networked Access to Library Resources: An Applied Research and Demonstration Project to Establish and Operate a Z39.50 Interoperability Testbed, is a 20-month project to design and demonstrate test methods and metrics to assess interoperability between systems using Z39.50. The overall goal for the project is to improve Z39.50 semantic interoperability among libraries for information access and resource sharing.

There are currently no accepted testing methodologies, formal processes, and interoperability benchmarks by which customers and vendors can assess conformance or demonstrate effective interoperability between Z39.50–accessible systems. The Z39.50 interoperability project focuses on:

- Developing and demonstrating rigorous methodologies, test scenarios and procedures to measure and assess the extent of interoperability between Z39.50 implementations
- Producing a model for interoperability testbeds that can be used by other communities.

The testbed provides a vehicle for assessing the degree of interoperability achieved between a vendor's implementation of Z39.50 clients and/or servers and the testbed's Z39.50 reference implementations.

The testbed is establishing a test dataset of 400,000 MARC 21 records from OCLC's WorldCat databse. Reference Z39.50 client and server implementations will be configured to specifications in the Bath and

U.S. National profiles. A set of test searches against the test dataset through the reference implementations will establish benchmarks for subsequent interoperability testing.

The testbed will be available to vendors and organizations that have Z39.50 client and server implementations. Z39.50 server implementations will mount the test dataset on their systems, and project staff will send test searches from the reference Z39.50 client. Results from the searches will be compared to the established benchmarks. Analysis of variance from the benchmarks will assist the testbed participants in fine-tuning their implementations to improve interoperability.

Conclusion

Interoperability between diverse information systems in the networked environment presents complex and at times confounding challenges. Recent studies evaluating Z39.50 implementations have found that the same searches done on different Z39.50 compliant systems can yield different results (Blue Angel Technologies, Inc., 1998; Hinnebusch, 1998; Lunau,1998). The studies documented librarians' concern about the reliability of Z39.50 to provide effective search and retrieval across library catalogs. Improvements in interoperability between systems can substantially increase users'–especially librarians and other information professionals–confidence that Z39.50 products provide reliable results when searching multiple resources.

The Z39.50 profiles discussed in this paper address the interoperability challenges for library applications. By specifying detailed configuration choices for Z39.50 clients and servers, the likelihood of interoperability is increased. The Bath Profile provides a foundation of core specifications for international interoperability, and national, state, and project profiles can build on the Bath foundation to address national or other requirements while safeguarding international interoperability.

Further these profiles provide a set of specifications that can be used to configure and test implementations. The Z39.50 interoperability testbed at the University of North Texas will provide a testing environment to assist implementors in improving their products. Another expected benefit of the testbed is that additional factors affecting interoperability will surface and can be address (e.g., local indexing practices).

The Z39.50 protocol offers an important, if not strategic, tool for networked information retrieval. After 20 years of work and development, we are close to solving critical interoperability problems. Ultimately, it is the users of our libraries who will benefit from these efforts. Unparalleled access to networked resources may finally become a reality.

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Bath Profile Z39.50 Server Compliance Test Results: Preliminary Findings

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Introduction

The Bath Profile[1] was released for public review and comment in October 1999 and endorsed as an ISO Internationally Registered Profile (IRP) in June 2000. Recognizing the importance of the Bath Profile for resource discovery and resource sharing, the library community quickly incorporated it as a fundamental Z39.50 server requirement for both new and existing implementations.[2] Not long after the release of the Bath Profile several library vendors were claiming Bath server compliance at major library conferences[3]. In an effort to validate the claims of these vendors and to provide libraries with an indication of the current state of server compliance a series of tests were conducted in January 2000, on a number of servers from a cross-section of vendors. The procedures underlying the testing and the test results are presented below.

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[1] See the National Library of Canada's Bath Profile web site: http://www.nlc-bnc.ca/bath/

[2] See Atlantic Scholarly Information Network minutes of February 11, 2000 (item 3.1, Common Interfaces – Z39.50
http://www.caul-cdbua.ca/minfeb00.html
and
Consortium on Institutional Cooperation News Release, November 2000:
http://www.cic.uiuc.edu/cli/bathprofileendorsenov00.htm

[3] Bath Profile Vendor Panel Meeting hosted by the National Library of Canada at the Canadian Library Association Annual Conference, Edmonton, June 2000:
http://novanet.ns.ca/consort/meet99/jun23-00.txt (item 13)
and
American Library Association Annual Conference, Chicago, June 2000:
http://www.ala.org/alonline/ts/ts900.html

Bath Profile Compliance Testing Procedures

A checklist of 41 requirements was constructed for levels 0 and 1 of Functional Area A, Basic Bibliographic Search and Retrieval, with Primary Focus on Library Catalogues (Appendix A). The checklist is not exhaustive. It focuses on the searches described by the profile which covers 29 out of 41 requirements. Perhaps the most difficult task was to find a suitable client to be used for the testing. The client had to:

1. Send all six attribute combinations as specified by the profile.
2. Support the following record syntaxes: XML, SUTRS, and (MARC21 or UNIMARC).
3. Support boolean operators, named results sets, scan searches and character set/language negotiation.
4. Provide extensive logging of messages.
5. Be easy to configure.

The Z Texas Client, developed by Crossnet Systems Limited for the Central Texas Library System, was found to be the most suitable for the test because it satisfied all of the above requirements, except for character set/language negotiation.[4]

The next step was to consult a variety of directories of Z39.50 servers to find the configuration information for the servers available from the various vendors. It was difficult to find configuration information for some servers since vendors and libraries do not typically publish this information[5]. The initial test included 19 servers from 12 vendors (Appendix B). Subsequently, servers from an additional 4 vendors were identified and added to the test.

Each server was tested against the checklist of requirements. Following a connection to a server, the Z Texas client displayed the following server configuration information based on the option bits returned in the initialization response:

1. Server implementation name and version
2. Z39.50 Protocol Version
3. Support for scan and named result sets

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[4] The ICONE client, developed for the ONE project, may be downloaded from the Crossnet Systems Limited web site:
http://www.crxnet.com
It is very similar to the Z Texas client except that it does not currently support the XML record syntax.

[5] Good places to start are the Library of Congress and Index Data web sites:
http://www.loc.gov/z3950/
and
http://www.indexdata.dk/targettest/

29 searches were sent to servers to test the remaining requirements. If a server returned a result set, follow-up searches were performed to determine whether the server was processing the searches as per the conformance requirements of the Bath Profile:

The goals, objectives, and detailed specification of this profile preclude Z-clients and Z-servers from "default" behavior. Z-clients are required to form queries using all attribute types and values listed for specific searches. Z-servers are required to execute the search specified in the query and are not to do a more general or a more specific search than the one specified in the query (e.g., Z-servers will not execute a Name search if the query specifies an Author search and vice versa).[6]

The test results were emailed to each vendor for verification and feedback. When tests revealed unusual problems they were repeated on other installations of the same version of the server in order to remove the possibility that the problems were related to a specific implementation. Tests were also repeated on upgraded and/or reconfigured servers supplied by some vendors.

Bath Profile Test Results

The initial test results were discouraging.[7] The only servers capable of satisfying 25 or more requirements out of 41 were from SIRSI Corporation (40), OCLC (27) and the National Library Of Canada (25). The remaining servers fell into a group that satisfied 12 or fewer requirements (Appendix B). The requirements satisfied by the majority of servers are listed below:

Requirement	Number of Servers (maximum 19)
Boolean operators: AND, OR, NOT	18
MARC 21 record syntax	16
MARC-8 character set	15
SCAN	14
Z39.50 Protocol Version 3	11
Named results sets	10

The problems identified by the tests include:

1. Improperly structured and/or encoded MARC21 records returned by the server.
   The majority of these problems were subsequently diagnosed by the vendors and attributed to inappropriate server configurations.
2. Unsupported attribute combinations.
   Many searches including "first words in field" and "standard identifier" were not supported by the majority of servers. Support for searches ranged from a low of 2 servers to a high of 9.
3. Default server behaviour
   All servers, except for the one from SIRSI, did not recognize and/or process all 6 attribute

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[6] The Bath Profile: An International Specification for Library Applications and Resource Discovery, Section 5, Conformance:
http://www.nlc-bnc.ca/bath/bp-current.htm

[7] The detailed test results for all servers are available at:
http://nofish.library.mun.ca/bathtest/report.htm

combinations comprising a search. This is contrary to the Bath Profile's conformance requirement which precludes default behaviour. Examples of default behaviour include substituting "do not truncate" with "right truncation" and interpreting the "word" structure attribute as "phrase" or "word list".

4. Indexing problems.
   The majority of servers did not comply with the proposed MARC21 indexing recommendations associated with searches. The most common problem was the inclusion of notes fields and statements of responsibility in title indexes which is contrary to the recommendations of the Bath Profile:

> A title search will look for matches in an index(es) derived from data elements containing the general title and alternative titles such as series title, uniform title, and variant titles; statement of responsibility is not generally considered part of a title search.[8]

On a positive note, vendors as a whole responded favourably to the reports even though they revealed serious problems with their servers. A couple of vendors quickly corrected some problems and/or added functionality to their servers for a retest. Other vendors indicated that they were working on addressing the problems identified in the reports. A small percentage of the vendors did not respond at all.

Conclusions

The test results reveal that most vendors have a lot of development work to do on their servers before they can claim compliance with the Bath Profile. The testing process itself is very time-consuming and requires the development of acceptable test methodologies that could be used in the certification of server compliance with the Bath Profile. The test results for a specific server may not be replicable across implementations of the same version of the server. The extent to which libraries are able to customize the indexing and/or attribute support for a server may impact on the test results.

Postscript

One of the goals of a recently funded IMLS Z39.50 interoperability testbed project at the University of North Texas is the development of:

> … rigorous methodologies, test scenarios and procedures to measure and assess the extent of interoperability between Z39.50 implementations with the goal of improving interoperability.[9]

The test results reported in this paper will be updated as new servers are made available by the vendors and until such time as the research results from the University of North Texas project are published.

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[8] The Bath Profile: An International Specification for Library Applications and Resource Discovery, Section 5, Conformance:
http://www.nlc-bnc.ca/bath/bp-current.htm

[9] The project website is: http://www.unt.edu/zinterop/

Appendix A

Bath Profile Release 1.1 Compliance Checklist
FUNCTIONAL AREA A - BIBLIOGRAPHIC SEARCH AND RETRIEVAL

Level 0

General Requirements
1. Record Syntaxes
MARC21
SUTRS
XML
2. Named Results Sets
3. Boolean operators: AND, OR, NOT
4. Character Sets
ISO Latin-1
MARC-8
5. Complies with MARC21 Indexing Recommendations
6. Recognizes and processes all 6 attributes, no default behaviour

Searches
1. Author Search - Precision Match for Established Name Heading
2. Title Search - Keyword
3. Subject Search - Keyword
4. Any Search - Keyword

Level 1

General Requirements
1. Z39.50 Protocol Version 3
2. SCAN
3. Character Set / language negotiation

Searches
1. Author Search - Precision Match for Established Name Heading with Right Truncation
2. Author Search - Keyword

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3. Author Search - Keyword with Right Truncation
4. Author Search - Exact Match
5. Title Search - Keyword with Right Truncation
6. Title Search - Exact Match
7. Title Search - First Words in Field
8. Title Search - First Characters in Field
9. Subject Search - Keyword with Right Truncation
10. Subject Search - Exact Match
11. Subject Search - First Words in Field
12. Subject Search - First Characters in Field
13. Any Search - Keyword with Right Truncation
14. Standard Identifier Search
15. Date of Publication Search
Date <
Date <=
Date =
Date >=
Date >
16. Scan Author - Exact Match
17. Scan Title - Exact Match
18. Scan Title - Keyword
19. Scan Subject - Exact Match
20. Scan Subject - Keyword
21. Scan Any - Keyword

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Appendix B

Bath Profile Release 1.1 Compliance Checklist
Summary Of Support For Requirements In Functional Area A - Levels 0 and 1
(Updated March 16, 2001)

Detailed reports for each server are available at: http://nofish.library.mun.ca/bathtest/report.htm

Vendor (Server)	No. Of Supported Requirements (Maximum 41)
SIRSI (Unicorn Version 2000 Bath Profile)	40
OCLC (WorldCat - Z39.50 Cataloguing Service)	27
National Library of Canada (AMICUS Version 3.0)	25
Endeavor Voyager (LMS Version 1.13)	12
epixtech (Horizon Marquis Version 3.0)	11
Geac (Test Advance Version 6.8)	11
epixtech (Dynix Version 2.0)	9
Geac (Advance Version 6.8)	9
III (Innopac Version 1)	9
III (Millenium with Oracle Version 1)	9
epixtech (New Reconfigured Dynix Version 2.0)	8
Ex Libris (Aleph 535.12.3 Version 1.4p12+)	7
Follett (Z39.50 Server Version 4.1.0)	7
Ex Libris (Aleph 505.12.4 Version 1.4p12+)	6
epixtech (iPAC 1.6)	6
Best-Seller (PortFolio Best-Seller V 1.0)	5
DRA (Taos Test Version 2.5-2 Release 2.8)	4
DRA (MultiLIS Version 11.1, Dec. 11, 2000)	3
Talis (BLCMP Target Development Version 0.0.0.1)	3

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67th IFLA Council and General Conference
August 16-25, 2001

Code Number: **166-204-E**
Division Number: **VI**
Professional Group: Management of Library Associations - **Workshop**
Joint Meeting with: Library and Information Science Journals
Meeting Number: 204
Simultaneous Interpretation: -

The Free Press: Editorial Independence in Association Magazines

Leonard Kniffel
Editor & Publisher, *American Libraries*
American Library Association

Let me begin by assuring you that my experience as editor of *American Libraries* tells me that what people say they want our association magazines to *publish* and what they actually want to *read* in our magazines are two different things entirely.

Let me also emphasize that *American Libraries* is not a scholarly journal; it is a magazine of news and features. It is also the official organ of the American Library Association. So, the extent to which any magazine can function as part of the "free press" will depend how the magazine is defined at its beginning.

The apparent contradiction between editorial independence and functioning as an official organ is part of what guides our selection of material for publication in *American Libraries*.

Active members of the American Library Association say they want us to publish committee news and press releases that portray librarians and the Association in the best possible light.

What they want to *read*, however, is something quite different. Reader surveys show they like to read letters to the editor that criticize the Association, or news reports about personnel crises and censorship, or articles and opinions that challenge some of the basic assumptions of our profession.

The famous American newspaper man H.L. Mencken once defined news in this way: "News is what somebody does not want to see in print. The rest is public relations." *American Libraries* is a magazine of news and features, and we the editors are charged with creating a readable publication. The time-honored separation between editorial and advertising, between content and finances is one we take very seriously, and pressure to publish or not publish is something we confront regularly.

Our policies manifested themselves in an interesting way again just a couple months ago, this time in a story about the executive director of ALA, which we were trying to get into the April issue at the very last minute. I had interviewed the executive director, and even showed him, which I am usually reluctant to do, the story we were planning to run concerning the renewal of his employment contract, just to make sure the story was accurate, since the negotiations for an extension of his contract had just concluded. Over the weekend, however, he called me to warn me that he had made a few more requests for changes in the contract and that the story I had shown him might no longer be accurate.

On Monday morning, I called the president of the Association to get a quote. "Oh no, we are still negotiating," she said, "and we would prefer that you don't publish anything in *American Libraries* about contract negotiations that are still in progress."

If I pulled the story, I had a five-inch hole to fill, and I would fear that once again we would get scooped by our competition—namely *Library Journal*--on a story about our own organization. It was clear to me, if not to the president, that readers had a right to know what the status of the executive director was. Those who were watching would know that his contract had expired in February, and we needed to tell them what was going on, and in the April issue not in the May issue.

You also have to understand the point of view of the president. Given that the American Library Association's recent history with regard to executive directors looks like a revolving door, the executive board, which hires and evaluates the executive director doesn't want its deliberations, which, after all, are confidential personnel matters, to be made public.

But the executive director's contract was up. *American Libraries* had reported nothing. I told the president that we are *going* to publish a story, so let's establish what information is public and what isn't, assuring her that I did not intend to publish anything confidential or foolish. We settled on the details that the board could reveal and the story went to press.

The second time it happened recently was in connection with the ALA Committee on Minority Concerns and Cultural Diversity. The group decided that *American Libraries* was not paying enough attention to diversity issues. Their solution, unfortunately, was to request that we install a diversity column. Now, if the magazine installed a subject-based column every time a unit of ALA asked for one, we would have a terminal case of what some journalists call "columnitis"—a magazine full of formulaic columns that satisfy some political need but simply don't get read. Similar to tonsils or an appendix, a useless organ that is never missed once it is removed.

I disagreed with the committee, but rather than simply tell them no, I suggested that there were dozens of spots in *American Libraries* for diversity issues. I made up a question-and-answer sheet designed to encourage people to submit press releases and other materials about their activities. After all, we cannot publish what we don't receive.

When anyone in the Association tells us we must publish something, or worse yet that we cannot publish something, the editors' ears perk up. We know that we are obligated to listen and consider, but then to make our own decision. The single thing that permits us to have this power and responsibility is ALA Policy 10.2, passed years ago by ALA's governing council. When I became editor, I installed the policy on the masthead so that it appears in every issue of the magazine.

The policy guarantees editorial independence in gathering, reporting, and publishing news according to the principles of ALA's policies on intellectual freedom. It calls for the magazine to be a platform for the expression of diverse views that is kept scrupulously and faithfully open to the expression of all viewpoints of interest and concern to the library profession. It calls for us to convey full and accurate information about the activities, purposes, and goals of the Association, but with due regard to the editor's prerogatives in producing a balanced and readable publication. It's a good policy.

Often the dilemmas presented by the apparent conflict between editorial independence and an obligation to protect the best interests of the association can be resolved with a little common sense and fairness and balance.

At other times, a choice had to be made. In 1992, the relationship between the executive director of ALA and the executive board reached an all-time low. Quite unexpectedly, the staff arrived at work one day to find that the executive director's office had been vacated. A cryptic note had been posted by the elevator doors indicating simply that she was gone and that was that—no explanation—and that she would not be permitted to reenter the building. Insiders knew that tension had been developing, but few were prepared for this abrupt severance. The staff was told to assemble in the staff room. The president and vice-president of the Association flew in to explain the situation.

I shall never forget that staff meeting. The then-editor of *American Libraries* felt compelled to ask questions. Why was she gone? Was she fired? Why? When had all this transpired? Who made the decision? The executive director had resigned, we were told. It was a personnel matter and the members of the executive board were permitted to discuss it no further. If we wanted information we should talk to the now former executive director.

What followed that meeting was a series of interviews, leading to a story, leading to accusations, threats of lawsuits, and a call for the firing of the editor on the floor of ALA's council. It was a terrible time, with mistakes made on all sides.

I ended up writing the news story that appeared in *American Libraries* about the executive director's abrupt resignation. When I look back at it, I am a little surprised that it is as fair and balanced as it was, considering how little anyone would tell us.

A few years later, I had an opportunity to repeat the exercise, when the executive director again resigned abruptly and mysteriously amid anger and innuendo. I asked the questions, and *American Libraries* again reported the facts to the membership, presenting the reasons given by both the executive director and the executive board.

Despite our reports on personnel conflicts and censorship battles across the country and the world, none have tested the real meaning of editorial freedom more than reporting on the personnel conflicts within our own organization. This becomes, after all, a matter of employees reporting on their employer.

But the editors of *American Libraries* are the ears of the membership, the readership, and it is to them that our ultimate answerability lies. We cannot permit the membership of the Association to get its news from some other publication. We cannot be silent when turmoil is the fact. It is our obligation to bring them the facts, to the extent those facts are knowable.

There is also a trust established in ALA policy that says the editor shall have access to privileged information. It is a very difficult trust to establish with the executive director if confidential information is revealed inappropriately. "Off the record" means off the record. Information revealed can inform our coverage, but it cannot be betrayed. This applies to any news story. Confidential sources cannot be revealed.

I have been at *American Libraries* for almost 13 years now, over five years as editor. I have seen us go from rubber cement, hot wax, and an Exact-O knife to PageMaker software and online news.

We are all experiencing changes in the way we do our work, but the one change that I'd like to emphasize is the change that's happening to the way people read. The competition for reading time has never been more desperate, and much of what guides our decisions is the question: Will anyone read it?

One of the things that magazines do periodically is conduct a readers' survey. A while back, a research firm conducted one of *American Libraries* readers.

Our response rate was 69%, higher than average and high enough to more than validate the survey results. The questionnaire asked readers to rank their interest in various parts of the magazine, from "no interest" to "little" to "moderate" to "strong." I'd like to share with you some of the things that readers say they want in or like about *American Libraries*. This, in turn, will demonstrate to you, I hope, what editors must look for as we prepare material for publication.

Most sections of the magazine were rated to be of moderate interest, with only five areas moving toward strong interest. The highest rated part of the magazine was feature articles. Our "Internet Librarian" column and the "Censorship Watch" section of news came in next highest, followed by "Currents" with its news about people, and "News Fronts USA," the hard-news section of the magazine. In the next layer were "Reader Forum" (which is Letters to the Editor), "Technically Speaking" a technology product review column, and "Will's World," a humor column.

American Libraries publishes a lot of information about ALA conferences, including a preliminary program in April, which was listed as the most popular of our conference-related content. Post-conference reports and coverage ranked slightly below the previews, with only moderate interest. Although their popularity did not exactly skyrocket since the last survey in 1993, our reports on ALA council and executive board actions still garnered "moderate interest" rankings. International news traditionally ranks low in our reader surveys, and this time around readers indicated that the amount that *American Libraries* currently publishes is just about the right amount.

Asked to indicate whether they wanted more or less coverage of 22 given topics, readers made the solid winner "professional development," with 58% of respondents "wanting more." In the next tier were: the Internet, technology, and management. Salaries, funding, reference services, marketing and public relations, censorship and intellectual freedom, library education, and literacy followed, all of these subjects with between 24% and 34% readers wanting more.

On the subjects of outreach, programming, preservation, youth services, social issues, equity of access, diversity, legislation, buildings and furnishings, trustees and boards, in addition to international relations, the majority of readers seem to be getting about all they want.

It is gratifying to know that 66% of our subscribers read at least part of every issue they receive. (Of course I worry about the 3% who said they had read none of their last four issues.) It is also instructive to note that only 22% of members (one in five) had visited *American Libraries* online in the preceding year. Of those, 62% went for job ads; only 43% to read the weekly news.

For most magazines, a reader survey is largely a marketing tool. It establishes a readership count and ranks sections of the magazine to establish the most desirable positions for advertisers. But for the editors, it is also a useful indication that what we are doing seems to be satisfying most readers.

The desire for more on professional development was perplexing to me at first. I tend to think that reading *is* professional development. But included in this survey was a section asking for general opinions about ALA itself. Professional development also topped the list of things respondents think the Association should do more of.

I suspect that there is a correlation between wanting to read more about the Internet, technology, and management and wanting ALA to do more for professional development. With so many of us being made to feel inadequate to the demands of new technology and rising user expectations, it is logical to think that one's professional association and its magazine ought to be doing something about it. Still, it was a surprise to many that respondents ranked "ALA meets a substantial portion of my educational needs" dead last in a list of 11 association activities. "ALA publishes useful and timely books" rated much higher. Our readers are not making the correlation that reading *is* continuing education.

Perhaps the most surprising survey result of all was this: Asked to indicate what ALA needs to do most, the statement receiving the strongest rating was: "ALA needs to do more to educate the public about the value of libraries." That response confirms a direction the ALA Communications Department has taken in recent months with a new @ Your Library publicity campaign for America's libraries, which was presented at this conference as an expanded campaign for the world's libraries.

This is what readers said they want from us, and what they like about what we produce for them every month, and this is what we publish. They have told us what is news to them and what isn't.

If you were to ask me why you should write for *American Libraries*, I would give you this short answer: Because you have something to say, and because, of any library publication, *American Libraries* is the place it will be seen, if not read, by more readers than anywhere else. I'd like very much to hear what your questions are about how we do what we do, and perhaps we can get into more details, but before we go on to discussion, I'd like to offer you some things to think about it comes to the journalistic ethics. If we are to be journalists in library publications, to publish hard news and critical commentary, we also have an obligation to write and publish ethically and responsibly.

Journalists should be free of obligation to any interest other than the public's right to know. In that freedom, they must also:

- Avoid conflicts of interest, real or perceived.
- Remain free of activities and obligations that may compromise integrity or damage credibility.
- Refuse gifts, favors, fees, free travel, and special treatment designed to gain favor.
- Shun secondary employment, political involvement, or office that compromises journalistic integrity.
- Disclose unavoidable conflicts.
- Be vigilant and courageous about holding those with power accountable.
- Deny favored treatment to advertisers and special interests and resist their pressure to influence news coverage.
- Be wary of sources offering information for favors or money and avoid paying for news.
- Just as importantly journalists must also minimize harm. Ethical journalists treat sources, subjects, and colleagues as human beings deserving of respect. Journalists should:
- Show compassion for those who may be affected adversely by news coverage and use sensitivity when dealing with inexperienced sources.
- Be sensitive when seeking or using interviews or photographs of those affected by tragedy or grief.
- Recognize that gathering and reporting information may cause harm or discomfort and remember that the pursuit of news is not a license for arrogance.
- Recognize that private people have a greater right to control information about themselves than do public officials or others who seek power, influence, or attention. Only an overriding public need can justify intrusions into anyone's privacy.
- Show good taste and avoid pandering to lurid curiosity.
- Be cautious about identifying anyone as a criminal before due legal process has occurred. Balance a suspect's fair trial rights with the public's right to be informed.
- Journalists must also be accountable. We must be accountable to readers, listeners, viewers, and each other. Journalists should always:
- Clarify and explain news coverage and invite dialogue with readers over journalistic conduct.
- Encourage readers to voice grievances against the news media.
- Admit mistakes and correct them promptly.
- Expose unethical practices of other journalists and news media.
- Abide by the same high standards to which we hold others.

Freedom of the press is to be guarded as an inalienable right of people in a free society. It carries with it the freedom and the responsibility to discuss, question, and challenge actions and utterances of our governing bodies and of our institutions. Journalists uphold both the right to speak unpopular opinions and the privilege to agree with the majority.

Over the years, we have published stories that have been difficult: a story about a former president of the association who was charged with misappropriating funds in the library where he was the director, a story about a children's librarian in a major urban library charged with molesting the youngsters in his care, a state librarian successfully prosecuted for sexual harassment, stories about librarians murdered on their jobs, stories about the massacre that occurred in a Colorado high school library. Stories like these appear in *American Libraries* every month. In the most recent issue, there is a news article about the firing of the editor of a rival magazine. I talked to the editor and to the publisher who fired her. I asked all the questions, and I can assure you many of the answers were off the record. But we told the story as plainly and honestly as we could. In another news story in this current issue, the director of a major city library was questioned about allegations of the mishandling of an estimated $4.2 million in grants, endowments, and gifts to the library. I have known about these allegations for a long time. We held off on the story until his accusers went public; we then felt it was our obligation to ask the questions.

We make the calls. We talk to the principle parties involved in any given case, and often to their attorneys. We conduct the interviews, we write the news, and we don't call anybody to ask for permission. This is our job. In many cases, we work hard to maintain probably the most supportive and sympathetic environment in which librarians can tell their side of a story. Still, the questions must be asked. No one is so powerful and so above reproach that the questions shouldn't be asked. We record the answers we are given.

In the USA we are very fond of top-ten lists, so in closing I'd like to offer you my own top ten list.

Here the top ten things that threaten journalistic freedom in Association publications:

10. The convergence of media, specifically the Internet, wherein anyone can be a publisher, with no quality or accuracy control.

9. The homogenization of news, wherein the media sources grow fewer and the viewpoints more and more uniform.

8. The movement of journalists into public relations for—understandably—better salaries.

7. A lack of understanding on the part of some librarians of the fundamental value of freedom of the press and its application within the profession.

6. A lack of organizational editorial policies that support the profession's basic tenets of intellectual freedom and freedom of the press.

5. The reluctance of professionals to write about controversial topics.

4. The tendency of many to want to "kill the messenger" for simply delivering the facts. Blaming the media for one's own failures is all too common among library leaders.

3. The reluctance of library associations and institutions to establish publications that truly are editorially independent news and opinion vehicles.

2. The acceptance of e-mail--with its barrage of irrelevant, sloppy, ill-conceived, time-consuming so-called messages that too often deliver nothing at all of substance but are becoming a substitute for journalism.

1. The lack of time available for reading and the lack of understanding that reading is still the librarian's best method of continuous education and professional development.

Perhaps you could help me add to the list, or perhaps you have other ideas about freedom of the press in library. I would be happy to hear from you now, or to answer any questions you might have about how *American Libraries* works.

67th IFLA Council and General Conference
August 16-25, 2001

Code Number:	**159-249-E**
Division Number:	**0**
Professional Group:	Guest Lecture V.
Joint Meeting with:	-
Meeting Number:	249
Simultaneous Interpretation:	**Yes**

Preservation in the USA: A Case Study in Cooperation

George Farr, Jr. and **Deanna Marcum**

Introduction

As we began thinking and talking about our separate talks for this morning's session, we rather quickly came to the conclusion that our presentation should take a cue from its title and be as "cooperative" in its development and delivery as possible.

Everything that we will be saying today is therefore the product of a number of conversations that we have had over the past few months. It has been a fascinating exercise for both us to look back at the past twenty years; to recall what needed to be done to create a "national" preservation program in this country; and to consider what has been achieved thus far---and what still remains to be done.

Moreover, during the course of our discussions, we decided to order our remarks in the form of a "story". For in many ways this *is* a story (if not a saga). It has a chronology and a certain narrative structure. There were a series of defining events or activities that can be seen as crucial to the outcome of this story. These elements of the narrative were, in turn, the result of significant decisions and commitments made by cultural institutions and the government as well as by individuals: all of whom can be viewed to some degree as "characters" in a story. And, certainly, for those of us who found ourselves playing a role in this narrative, there were times when this experience reflected other traditional aspects of a story: a sense of crisis, surprise, and suspense; "trials" and obstacles to be overcome; frustration and disappointment; but, often too, the satisfaction that arises from a realization that there has been progress and success.

The Organizations Involved

To tell this story required a rigorous process of selection. This is a large and complicated subject. We are acutely aware of much that was interesting and important that had to be left out, if we were to tell this story within the time that was available this morning. Inevitably, perhaps, "our" story will tend, at times, to focus on the role played by the two organizations we know best: the National Endowment for the Humanities and the Council on Library and Information Resources. But we do wish to emphasize, at the outset, the degree to which a United States preservation program represents the cooperative, if not formally linked, activities of a great number of institutions and organizations.

For example, a list of institutions, agencies, organizations, and associations involved in the history and current implementation of the preservation effort in the United States might include:

- The American Library Association;
- The Association of Research Libraries;
- The Society of American Archivists;
- The Council on Library and Information Resources (and its predecessors, the Council on Library Resources and the Commission on Preservation and Access);
- The American Association of Museums;
- The Association of State and Local History;
- The Library of Congress, the National Library of Medicine, and The National Agricultural Library;
- The National Archives
- The National Information Standards Organization;
- The Research Libraries Group and the Online Computer Library Center (OCLC);
- The American Council of Learned Societies;
- Regional Conservation Centers and Field Service Programs;
- The National Endowment for the Humanities;
- The National Historic Publications and Records Commission;
- The Institute of Library and Information Services;
- The United States Department of Education;
- State Preservation Programs (where they exist);
- Private Foundations especially the Mellon Foundation

And, of course, this list does not acknowledge the major role played by individual, non-federal libraries in mounting a successful preservation program in the United States.

Our story will concentrate on the period from the early 1980s to the present---and, since this is a session at IFLA, focus on the work of libraries, although it should be recognized that the story of preservation in the United States involves many kinds of cultural repositories and collections. Moreover, where relevant, we also will discuss the manner in which preservation activities in the United States has had an impact on the preservation of cultural resources of other countries.

The Landscape of Preservation

The preservation landscape in the early 1980s was far from tidy. Of the 3,000 plus American academic libraries and the additional 16,000 public libraries, only a handful had serious preservation programs. There were no national preservation programs, nor were there federal funding sources for preservation work. Since preservation work was viewed as a local issue, there was little coordination, and quite truthfully, little progress.

Yet, preservation was a recognized problem. Libraries in the United States—at least the large research libraries—have always been concerned about preservation. Unlike many other countries, the United States does not have a national library that is charged with preserving the intellectual output of the nation. Instead, we have a distributed system of research libraries, working alongside the Library of Congress, who have accepted responsibility for preserving those materials judged to be important for research and scholarship in the future.

Though coordination was lacking, many organizations had in fact taken note of the many books printed after 1865 that were crumbling to dust on their shelves. The Council on Library Resources, when it was formed in 1956 made one of its first grants to the Barrows Laboratory at the Virginia State Library to study the causes of paper deterioration.

The Library of Congress established a National Preservation Office that aimed to disseminate cost effective information about preservation techniques. LC believed that its special role was to preserve the artifact, and, subsequently invested a great deal in a deacidification facility that would allow treatment of hundreds of thousands of books annually. In an effort to understand the magnitude of its own preservation problem, LC in 1984 commissioned King Research, Inc. to do a condition survey of the general and law collections. This survey helped LC understand what portion of its collection was already so brittle it would have to be formatted and what portion would be stabilized and strengthened by mass deacidification.

The Association of Research Libraries, reacting to a report compiled by Warren J. Haas, then the librarian at Columbia University, went on record confirming the importance of book preservation, and more to the point, resolving that preservation should be a national cooperative effort. Especially the largest and oldest of the research libraries were convinced that while they all shared a responsibility for preserving the important research materials, there was reason to be concerned about the cost of establishing independent preservation facilities.

The Council on Library Resources, of which Jim Haas had become president in 1978, continued to press the case for a coordinated, national strategy. In the early 1980s, CLR, along with the Association of American Universities, established five task forces on the most pressing problems confronting research libraries. One of the task forces studied the preservation challenges of these libraries. The group of scholars, university administrators, and librarians recommended that the preservation problem should be given more visibility and attention by creating a standing committee that initiated coordinated activities and monitored progress. The naming of the committee signaled an important direction for preservation activity in the United States—it was called the Standing Committee on Preservation and Access. After meetings in 1982, 83, and 84, the committee renamed itself to The Commission on Preservation and Access to reflect the true nature of the assignment. The Council on Library Resources agreed to fund the start up costs of what would become a separate organization, with the understanding that large university libraries and private foundations would pick up the ongoing costs. The first meeting of the Commission on Preservation and Access was held in April 1986, and by that time, it was a special-purpose, autonomous organization that was focused on preserving a significant portion of the intellectual record.

The first step was to involve an information scientist with a strong mathematical background to determine the scope of the preservation problem. Through an overlap study of bibliographic data, Professor Robert Hayes determined that of the 305 million volumes held in research libraries, some 11 million volumes were both unique holdings and at risk of embrittlement. Further, he estimated that it was economically feasible to microfilm, and thereby preserve, approximately one-third of the unique materials. Professor Hayes further calculated that thirteen percent of the target books had already been microfilmed, so the goal of the Brittle Books program was set at 3 million volumes.

Patricia Battin, who was the university librarian at Columbia University in 1985, was named the first president of the Commission on Preservation and Access. From the beginning of her tenure, Ms. Battin concentrated on the larger context of preservation. Although at the time of her appointment many of the preservation specialists questioned her lack of specialized preservation expertise, it quickly became apparent that someone of her caliber and reputation could do far more than anyone else in galvanizing the library community and in calling attention to preservation as a national, and ultimately international, problem worthy of high level attention and serious funding. She used the Hayes study as the evidence needed to mount the preservation campaign.

Fortunately, at the time Ms. Battin began her work at the Commission on Preservation and Access, there were a number of existing cooperative organizations , networks, and traditions in the United States. In large part, cooperative networks developed in the U.S. in response to the need to create a comprehensive, national bibliographic database, and later, to develop a responsive interlibrary loan system for all libraries in the nation, and beyond. With an extensive bibliographic underpinning, libraries were able to move quickly to consider providing information about what was being preserved, and what was in the queue for preservation. The national network of bibliographic records created by OCLC and the Research Libraries Group made it relatively easy to graft preservation information onto the system.

In other words, the story of preservation is one of the success stories of library cooperation in the United States. In the 1980s, we had a number of organizations that had identified preservation as a major national problem, but it was federal funding through the National Endowment for the Humanities that provided the glue to hold these distinctive organizational efforts into a coherent national program.

The NEH Program

Our story has now reached the opening months of 1988 and an event that proved to be decisive in the history of preservation in the United States. The setting for this event was a Congressional Hearing, in which organizations and citizens were invited to testify on behalf of the annual budget appropriation for the National Endowment for the Humanities. At that time, the Association of Research Libraries, the National Humanities Alliance, and the Commission on Preservation and Access joined forces to present testimony to members of Congress about the millions of brittle books and serials in the nation's libraries and archives and the danger that the loss of these resources posed for scholarship and education in the humanities. They argued forcefully for increased funding that would allow NEH to alleviate this crisis.

To the delight of the library community, the chairman of the Appropriations Committee asked NEH to describe how the agency would use an enhanced Federal allocation to address the problem of brittle books. And this request, in turn, gave the NEH and its nascent Office of Preservation an unprecedented opportunity to present its own preservation plan to the United States Congress and to the country.

This plan clearly built upon the strategies, the understandings, and the institutional structures and capacities (which Deanna has described) that laid a necessary foundation for the implementation of a viable Federal program.

NEH's preservation plan also reflected (and in some instances reaffirmed) a series of assumptions and policy decisions about the appropriate form and scope of a government grant program for preservation in the nation's cultural institutions.

Assumptions underlying the Program

Having assurance of Federal funding made possible a program that linked preservation and access. We took the position that it would do the country little good to spend millions of dollars on grants for preserving cultural resources if these resources could not be widely used because no one knew what had been preserved and where they could be found. Conversely, it certainly did not seem to be in the public interest to expend millions of dollars on cataloging projects and other kinds of intellectual access to collections, which then could not be consulted because of their fragility. From the perspective of public policy, it seemed essential that preservation be undertaken in a manner that, wherever possible, would ensure broad access over an extended period of time to important cultural resources, even if such an approach resulted in more complicated projects.

A second major assumption governing NEH's preservation "plan" was that it should provide support for projects that sought to preserve and establish intellectual access to the full range of endangered humanities materials and formats: books, serials, manuscripts and other historical documents, photographs, sound recordings, film, and objects of material culture. The problem of brittle books---as important and "catalytic" as it was in focusing the nation's attention on preservation---was not the only preservation problem that required national support.

A third, related assumption was that a federal program should not only fund the preservation of significant cultural materials but also projects and programs that would help create a permanent "infrastructure" for the work of preservation across the country. This principle led to the inclusion in NEH's preservation plan of initiatives for education and training on a regional and national level, which would help the staff of our cultural institutions acquire the knowledge they needed to preserve the holdings for which they were responsible. It also resulted in a grant category for research and demonstration projects, which could engage as yet unsolved preservation issues or support projects that would develop tools that would reflect standards and best practices for the work of preservation.

In formulating its preservation plan, the Endowment also determined, as a matter of policy, not to confine its support for preservation to the United States imprint or to materials that focused solely on the history and culture of this country. Libraries in the United States have, fortunately, been in a position to form comprehensive collections, which reflect the history and culture of the world and contained materials that were also at risk. The citizens whom the National Endowment for the Humanities was specifically created to serve, as well as citizens of other countries, would inevitably be ill served by a preservation program that did not encompass the full record of human experience.

Cooperative Microfilming Program

The multi-year plan that NEH formally submitted to Congress in April of 1988 answered the original question posed by Congress by defining a microfilming initiative that (if funded to the requested levels over a twenty-year period) would enable the nation to salvage the intellectual content of approximately three million brittle volumes. Microfilming was at that time the most reliable technique for preserving large quantities of library materials. Projects funded by NEH would be expected to produce three generations of microfilm: a master negative for permanent storage, a print master (which must be stored separately in an environment that meets national standards), and a service copy, which must be available on interlibrary loan. Grantees must also agree (as copyright permits) to supply, at cost from the print master, copies of any film created with NEH support that other libraries may wish to acquire for their own collections.

U. S. libraries could participate in NEH's national microfilming program by submitting proposals that focus on their own holdings or by working in consortial arrangements with other institutions. Some libraries with large collections have done both. Applications must provide a detailed account of the scope, intellectual content, and distinctiveness of the subject holdings that comprise the focus of the project. In response to the concern of scholars that selection for preservation be as representative as possible and not be held captive to contemporary notions of significance, NEH encouraged applicants to select comprehensive subject collections that reflect a consensus of what scholars and academically trained specialists in libraries have thought significant over an extended period of time. Every proposal must also demonstrate that it will follow national standards and best practices for the bibliographic and filming phases of the project.

Since 1989, the year that NEH implemented its expanded preservation program, 83 libraries and library consortia have participated in this initiative. When currently funded projects are completed, over 1,046,000 volumes will have been microfilmed and approximately 57,000 volumes from these subject collections that were not sufficiently fragile to warrant filming have been repaired.

The range of national imprints and subject matter encompassed by this effort has been extraordinary---and, frankly, too large even to recite without cutting too severely into the time we have available this morning. Let me just say that NEH-supported projects have addressed holdings important to the study not only of the United States, but also of the history and culture of numerous countries in Central and South America, Africa, Asia, India, Europe, Russia, and the Middle-East, as well as of Canada and the Caribbean Islands. With regard to Africa, for instance, I was gratified to find when I examined our records that this initiative has already filmed materials relating to the history of 15 nations that has been written in 10 languages.

Projects have focused on collections of significance for scholarship in history, literature, linguistics, philosophy, the social sciences, and the history of religion, the arts, education, mathematics, science, technology, medicine, and jurisprudence: in fact all the fields in the humanities.

NEH also supports a coordinated national initiative for cataloging and preserving on microfilm 19th and early 20th century newspapers, which document the civic, legal, historical and cultural events that occurred in small towns and cities across the country. The United States Newspaper Program is funded by NEH and administered in cooperation with the Library of Congress. A centralized bibliographic record of all newspaper titles published in America since 1690 will eventually be created and microfilmed copies of are made of those papers that are deemed to be of the greatest importance. All the 50 states, Puerto Rico, the Virgin Islands, and the District of Columbia have been involved in this effort (as well as the Library of Congress, which has supported the cataloging of its holdings with its own financial resources). Completed and current projects will produce bibliographic records of 151, 500 newspaper titles and will have microfilmed 62 million pages of fragile newsprint. NEH expects that the United States Newspaper Program will conclude in 2007, but each state project has made a long-term commitment to maintain the database and to continue filming current publications and newly-discovered titles.

NEH's preservation program also makes provision for the support of all types of special collections of unique materials important to the humanities. Since 1989, the Endowment has funded preservation and access projects in over 265 special collections and archives, whose holdings are important for an understanding of the history and culture of the United States, South America, Europe, Africa, and Asia. I should perhaps add that the Endowment also makes grants to preserve significant collections of material culture, primarily in museums. Since 1999, NEH has made grants for projects that have stabilized over 30 million historical and ethnographic objects.

I mentioned earlier that support for preservation education and training were a critical component of NEH's program. At present, the Endowment makes grants that support students in all four programs in the United States that offer advanced degrees in preservation and conservation. NEH also funds the work of six regional field programs in the United States that provide on-site preservation surveys, consultations, workshops, and other information services to hundreds of cultural institutions across the country every year.

In this context, it is only fitting that I mention the extraordinary accomplishments of one of these programs, which is located at the Northeast Document Conservation Center, and whose President is Ann Russell, the convener of this session. Over only a two-year period, the NEDCC mounted 111 workshops, lectures and talks; conducted 65 on-site preservation surveys; provided disaster assistance to 46 institutions; answered nearly 2900 hundred inquiries about preservation problems; and recorded over 1.3 million visits to its web site. It has not only confined its services to the United States, however. Staff from NEDCC has traveled to Cuba and Russia to help their cultural institutions address preservation problems. It has created a two-year exchange program for conservators from Argentina, Brazil, and Chile. And its manual, entitled *Preservation of Library and Archival Materials,* has been translated into Spanish, Portugese, and Russian. A version of this manual in both Spanish and version is now available on the Web.

The content of this manual was drawn from a number of special leaflets that were funded as part of NEH's grants to NEDCC. These kinds of educational tools become a highly useful means of transmitting knowledge of appropriate preservation practice to audiences that may not be able to attend workshops or other training opportunities.

In recent years, in response to a series of hurricanes and other natural disasters, the Endowment supported the publication of an educational tool called the *Emergency Response and Salvage Wheel.* By turning various sections of this "wheel" to the relevant type of material, you can find the essential information you need to protect or salvage a collection during the first 48 hours of an emergency. This reference wheel was initially distributed to 47,000 libraries, archives, museums, historic sites and preservation organizations in this country free-of-charge. An additional 15,000 wheels have been sold since that time. It has now been translated into Chinese, Dutch, and French, and, with additional support from NEH, a Spanish version will soon be available.

Environmental Controls

We know that perhaps the single most important action that can be taken to increase the longevity of collections is the creation of appropriate environmental control. Yet, given the complexity and expense of such projects, it is often difficult to make those responsible for the budgets of cultural institutions understand the difference that such effort may make. The NEH has therefore provided major support for James Reilly, Director of the Image Permanence Institute at the Rochester Institute of Technology to develop a mathematical model for the effect of varying climatic conditions on paper-based materials, photographic prints and negatives, moving images, and CD-ROMs. These mathematical models were subsequently incorporated into a specially designed computer chip, which is imbedded in a datalogger that converts temperature and relative humidity readings into an index of longevity. You can thus demonstrate what the effect of current environmental conditions on collections will be over time and then how many years of increased longevity would be gained by improving these conditions by even a small change in temperature and relative humidity. The device, together with a searchable database of information about the environmental requirements of specific types of objects is currently being field-tested at 182 cultural institutions.

Private/Public Partnerships

Last year, NEH made 199 grants (totaling $18.3 million) for preservation and access projects that involved 224 institutions in 41 states, Puerto Rico, and the District of Columbia. Since FY 1989, when Congress increased its funding for preservation at NEH, the Endowment has expended over $222 million. The wards have, in turn, leveraged an additional $12 million from private donors and foundations for NEH-supported preservation projects. Moreover, the division's grants have generated cost sharing of $ 105 million from the institutions that received NEH grants. Last year alone, cost sharing by institutions participating in NEH projects equaled 87 percent of the Endowment's own investment. Such statistics indicate the degree to which, even financially, the United States preservation program has become truly a cooperative effort between the federal government and the private sector.

Preservation Infrastructure

The combined preservation efforts of the many organizations involved over the past ten to fifteen years have established a preservation infrastructure that has three components: cooperative reformatting programs along with the required standards for capturing content; education and training on a regional and national level; and increased public as well as professional awareness of the importance of preserving endangered cultural resources.

As you know from the NEH statistics, a sizeable body of deteriorating library materials has been microfilmed to high-level specifications, ensuring that those materials will be available to library users for generations to come,

Education and training was an especially difficult problem to tackle in the beginning because our schools of library and information science did not include preservation courses. We had to convince influential library educators that it was essential to incorporate preservation into the curriculum at many different levels, and we managed, with NEH and Mellon funding to establish a specific educational program for preservation administrators first at Columbia University and then at the University of Texas.

General awareness of preservation issues was greatly enhanced by the production of a documentary film, *Slow Fires,* that was broadcast on American public television to an initial audience of about 9 million viewers. Over the years, the film has been shown to a number of international audiences as well, and the film has been translated into Chinese, Spanish, Japanese, French, Portuguese, and Russian.

All of these efforts to build infrastructure had the effect of increasing preservation staff in research libraries, In the period from 1988 to 1999, the number of preservation programs in the nation's research libraries rose from 76 to 118. In 1999, these institutions collectively employed 1,825 staff working on preservation activities.

What Have We Learned?

One of the most difficult lessons is that preservation efforts, no matter how important they are believed to be, are hard to sustain over time. New challenges arise and make their demands for funds. Talented and creative library staff generally want to be involved in thinking about and implementing new projects rather than sustaining the old ones. Collaborative networks formed to create new programs are difficult to sustain, too, as committed individuals move on the next challenge or retire. These challenges are not unique to preservation, but they must be considered by anyone thinking about what it requires to keep a preservation program viable.

Technological changes, funding priorities and competing interests have shaped the national preservation agenda, but at each turn, library organizations that hoped to keep the spotlight on preservation managed to find a way to find the right approach to bring attention to the issue. Some technologies are introduced before they are feasible on a large scale; some never materialize. We have learned that just because a technology is not appropriate at one time does not mean it will never work. Consider mass deacidification. In the late 1980s, it was dismissed because the commercial vendors did not believe there was a mass market, but today, there are new and exciting signs of life for this technology.

The NEH preservation and access program recognized early on that preservation was much more than any single thing. Preservation of the intellectual and cultural record requires a multi-faceted, cooperative, and sometimes overlapping, approach.

Federal funding dictated that we put national interests above local interest, but participating libraries had to feel that their institutions' efforts were contributing to the national whole. Understanding this interrelatedness of institutional priorities and the national agenda has been critically important to the success of the preservation effort.

We have also learned that trends in technology, while important to monitor, have to be evaluated in terms of long-term preservation, not simply in terms of access. From the beginning of the national preservation program, there were critics of microfilming, pointedly described as an "outdated technology, one not friendly to users. Digital technology, while vastly superior as an access medium, has yet to prove itself as a long-term preservation tool. And those institutions that see themselves as stewards of the intellectual record, are forced to consider which technologies will be most reliable for ensuring the preservation of those materials for hundred of years.

Perhaps the most important thing we learned is that focus is the key to program success. While the preservation problem was enormous in American libraries, including deteriorating materials in many different formats, we recognized that we had to choose one area in which to begin and show evidence of success. We began with Brittle Books, and the successes we have had there give us the credibility and courage to continue on with other formats that have received little attention thus far.

We recognized that projects of this magnitude require public/private partnerships. Private foundations joined the National Endowment for the Humanities in funding the national preservation program. Since 1989, awards from NEH's Challenge Grant program has generated over $57 million in new money from the private sector for preservation. Notably, The Andrew W. Mellon Foundation made substantial grants in support of education and training of preservation administrators and of preservation microfilming of special collections in the largest research libraries. More recently, the newly created Institute of Museum and Library Services has created a category of funding for preservation and digitization in its Leadership Grant Program.

The Commission on Preservation and Access recognized almost from the beginning of its existence that preservation programs cannot exist in isolation from the rest of the world. Scholarship does not observe national boundaries, so preservation necessarily becomes an international effort. The Commission established in the early 1990s a counterpart organization in Europe—the European Commission on Preservation and Access—and also assigned a full-time program officer to work with preservation groups in all regions of the world to promote the cause of preservation and to solicit substantive partnerships where appropriate. Here again, The Andrew W. Mellon Foundation's funding made this international program possible.

Looking to the Future

There are many other wonderfully positive results from the preservation effort. But it would be wrong to give the impression that it has been always easy. If we have learned a single lesson, it is that concentrated attention over a long period of time on a single issue is very difficult.

Since 1989, digital technology has appeared on the scene, and libraries, large and small, are examining the possibility of employing it in the cause of preservation. In some institutions, digitization of existing collections as a means of extending access to library users has become a glamorous competitor of microfilming funds. Digital images and accompanying searchable texts are far easier to access and use than microfilm and can be made from film as well as from originals. Accordingly, digital projects are getting an increasing proportion of available library funds.

The appropriate use of digital technology has become a source of debate among librarians. Libraries that have deteriorating books continue microfilming because microfilm, more durable than computer tapes and disks, remains the best transfer-medium we have for long-term preservation. Among other preservation disadvantages, digitized texts require periodic migration, or transfer, to new systems as hardware and software needed to read them become obsolete. Yet, microfilming seems less urgent to libraries now because experience indicates that mass-de-acidification techniques and proper housing can give endangered books more time.

It is not surprising, then, that through a combination of time passing and technological developments, many librarians in the United States are now considering what the proper configuration of a preservation program should be for the new century

We recognize, too, that one of the important roles CLIR has made in the past has been the distribution of information about preservation research and trends. We acknowledge the need to continue to perform this service even as preservation efforts adapt and evolve to new conditions.

The Commission on Preservation and Access concentrated on identifying the most important preservation problems that could most effectively be addressed cooperatively and bringing together representatives of those institutions most likely to be able to solve the problems. With assistance and modest financial support from the Commission, many libraries have contributed to the overall preservation effort. The work of the Library of Congress' preservation division has been enormously helpful, but with NEH funding and private foundation support, we have been able to think about the needs of the richly varied institutions across the country.

In recognition of this diversity, and the fact that many small and mid-sized cultural institutions in the United States hold materials of importance to our cultural heritage, NEH recently inaugurated a new category called *Preservation Assistance Grants*. These awards of up to $5,000 enable institutions to engage experts to assess the preservation needs of their collections, or send members of their staff to preservation training workshops, or even purchase equipment and archival supplies that will help preserve their collections. In the first two years of the programs' existence, NEH has received 454 applications and made 29e awards, a statistic that certainly seems to suggest that this category of support serves a national need. Moreover, the final reports that are being sent to NEH at the conclusion of these grants indicate that, small as they are, these awards are having a catalytic effect, in helping an institution for the first time to raise funds from private donors, increase the number of its staff, stimulate public interest in its work, and, on occasion, discover significant material in its collection that had been forgotten.

This story is far from finished. While the Brittle Books program is moving successfully toward its goals, new technology has appeared on the scene. The great interest in digitizing library materials to increase access has at times put access and preservation in competition with one another for resources. Collections of recorded sound, digital television, film, and visual images are growing rapidly in research libraries, and preservation specialists are painfully aware that the historical record of the 2oth century and beyond will increasingly be found on these new media. So preservationists now look to the future, trying to identify opportunities, technological breakthroughs, new sources of funds to call attention to the problem and to continue their important roles of stewardship over the cultural resources that define our heritage.

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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Convening Notice of the 67th IFLA Council Meeting

To: Voting Members of IFLA

Date: June 2001

Please forward these documents, including your IFLA Voting Card, to your voting delegate who will attend the IFLA Council to be held in Boston, USA on Sunday 19th August and Friday 24th August, 2001

The Executive Board of IFLA has pleasure in submitting this convening notice of the 67th Council meeting of the Federation.

The Council will meet at the Hynes Convention Center, Boston, Massachusetts, USA, on Sunday 19th August 16:00 - 17:30 and Friday 24th August 15:00 - 17:00

Ross Shimmon
Secretary General

AGENDA

Council I: Sunday 19th August 2001, 16:00

1. Opening by the President, Christine Deschamps
2. Adoption of the Agenda
3. Minutes of the previous meeting, held on 13th and 18th August, 2000
4. Communication by the Boston Organizing Committee
5. Appointment of Tellers
6. Formal Announcement of the results of the Postal Ballot for the election of President-elect and for places on the Governing Board.
7. Presentation of the Annual Report by the Secretary General
8. Tribute to Birgitta Bergdahl
9. In memoriam: Council will remember those colleagues who have died since the last meeting
10. Presentation of the Annual Accounts 2000 by the Treasurer
11. Proposals for new categories of membership by the Treasurer
12. Report by Adolfo Rodriguez on the work of the Advisory Group on the

Division of Regional Activities.

13. Adjournment of Council until Friday 24th August.

Council II: Friday August 24th 2001, 15:00

14. Opening by the President, Christine Deschamps
15. Motions and Resolutions (see notes below)
16. Members scheduled for deletion for non-payment of membership fees
17. Evaluation of the Conference and of the Professional Activities, by the Chair of the Professional Board
18. Announcement of results of elections to the Professional Committee
19. Announcement and Presentation of Awards
20. Announcement of invitation of expressions of interest to host the general conference in 2007
21. Invitation to the general conference in Berlin, 2003
22. Invitation to the general conference in Glasgow, 2002.
23. Votes of thanks by the Treasurer.
24. Closure of the Conference.

NOTES

1. Voting will take place on agenda item 11, Proposals for new categories of Membership, during Council I. Voting may also take place during Council II on any motions and resolutions submitted.
2. Voting delegates should take their seats in the designated area in the front of the hall.
3. Voting delegates are representatives of those International Association Members, National Association Members and Institutional Members who have paid their membership fees for 2001.
4. Personal & Student Affiliates are invited to the Council meetings, but they do not have voting rights. Therefore, they do not receive voting cards.
5. **Voting Papers:** Voting delegates can obtain the necessary voting papers at the IFLA Voting Office located in the Registration area of the Hynes Convention Center. Voting papers will be distributed only to those delegates who are in possession of the IFLA Voting Card, duly signed by the appropriate authority. The IFLA Voting Card is enclosed with these documents. Voting Members who had not paid their fees for 2001 at the time of despatch of these papers, but who pay subsequently, will receive their voting cards later. Late payments may be accepted during the conference at the Voting Office, in which case, the voting cards may be collected at the same time.
6. **The Voting Office** will be open on Friday 17th August from 14:00 - 18:00, Saturday 18th August from 09:00 - 18:00 and Sunday from 09:00 until 16:00.
7. **Please collect your voting papers as early as possible. Please do not leave it until the last minute!**
8. If necessary, the Voting Office will open from 13:30 - 15:00 on Friday, 24th August.
9. **Representation:** the relevant articles of the IFLA statutes and Rules of Procedure are as follows:

- Statute 15.1.1 Each Member is entitled to be represented at Council by one or more representatives. One such person shall be designated by the Member to exercise the right to vote.
- Statute 15.8.1 Each Member may be represented at a Council Meeting by another Member. Such Member may exercise proxy votes on behalf of the Members they are representing.
- RoP 5.2.3 To obtain these [voting] papers, representatives, or proxies of qualified Members shall present themselves at the time and place as publicly announced at the Voting Office with the membership certificate [IFLA Voting Card] of the member concerned, which certificate [IFLA Voting Card] shall carry the name of the representative or proxy, and the signature of the competent authority of the Member concerned.

10. **The deadline** for submitting motions and resolutions to the Secretary General is **Wednesday 22nd August, 12:00**.
11. **Motions:** According to the Rules of Procedure (Rule 2.1.9), a Motion is a proposal that the Council take certain action or that it express itself as holding certain views. A motion must be seconded. A motion may be made from the floor in a Council meeting, but must at the same time be handed over in writing to the Chair. A motion may be made and seconded by:
    - Authorised representatives of Members
    - IFLA Officers [Members of the Executive Board and Professional Board, Directors and Officers of Core Activities, Chairs, Secretaries and Treasurers of Divisions, Chairs and Secretaries of Sections and Round Tables]
12. **Resolutions:** two types of Resolutions are distinguished in the Rules of Procedure (Rule 2.1.10): general resolutions and professional resolutions.
    - **A general resolution** is defined as a written statement aiming at a decision (be it resolved that ..."). Such resolutions can be made by authorised representatives of Members and IFLA Officers (see definition in Note 7 above) only.
    - **A professional resolution** is defined as a written statement indicating an intention or a position which needs further clarification by one of IFLA's profesional steering bodies before any follow-up can be expected. A professional resolution needs no seconder and can take any form. No discussion normally follows acceptance of a professional resolution, although clarification can be sought and provided at the discretion of the Chair. A professional resolution may be submitted by authorised representatives of Members, or persons acting on behalf of the Core Activities, Divisions, Sections, or Round Tables.

Latest Revision: *June 14, 2001*

International Federation of Library Associations and Institutions
www.ifla.org

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

Resolution adopted at IFLA Council II held at Boston, USA on Friday 24th August 2001

The following resolution was adopted. 553 votes were recorded in favour of the resolution and 54 against. There were 12 abstentions.

"Be it resolved that IFLA:

1. State its strongly felt concerns about the effects of the US embargo that include

- Obstacles to the export of information materials to Cuba despite their formal exclusion from the embargo
- A severe reduction in the capacity of Cuban libraries and citizens to purchase information materials and related technologies due to the economic effects of the embargo
- Indirect disruption of access to information by Cubans and Cuban libraries caused by the effects on power supply, telecommunications and other aspects of life in Cuba
- Inhibitions to professional interaction and exchange caused by the restrictions on travel to the US by Cuban nationals and to Cuba by US nationals.

2. Urge the US Government to eliminate obstacles to access to information and professional interaction imposed by its embargo and any other US Government policies.

3. Urge the Cuban Government to eliminate obstacles to access to information imposed by its policies.

4. Support and continue to monitor initiatives by the Cuban library community to safeguard free access to print and electronic information, including via the Internet, and in particular:

- Support and assist the ASCUBI [Associación Cubana de Bibibiotecarios] initiative to develop a code of ethics for the standards and principles of library services in Cuba.
- Urge the Cuban library community to adopt fully the IFLA Public Library Guidelines [The Public Library Service: IFLA/UNESCO Guidelines for Development. Saur: 2001]

5. Encourage IFLA colleagues to attend the international conference on information in Havana 22-26 April 2002 hosted by IDICT [Instituto de Información Cientifica y Tecnológica] to help further professional relations with Cuba.

6. Urge the US Government to put policies in place to make sharing of books and other materials on all subjects as well as information technology with Cuba's libraries easier for all who wish to improve access to information in Cuba through strengthening library collections.

7. Urge the US Government to share information materials widely in Cuba, especially with Cuba's libraries, and not just with "individuals and independent non-governmental organizations" that represent US political interests."

This resolution was a homologated version of two resolutions on the same subject.

The first resolution was proposed by Alex Byrne, Chair of the IFLA Committee on Free Access to Information and freedom of Expression and seconded by Glenys willars, Chair, IFLA Section on School Libraries and Resource Centres.

The second resolution was proposed by John W. Berry, President of the American Library Association and seconded by Eliades Acosta, Director of the Biblioteca Nacional José Marti, Cuba.

The homologated resolution was proposed by Bernard Margolis, President of the Boston Public Library, USA and seconded by James Neal, Dean of the University Libraries, Johns Hopkins University, Baltimore, USA.

Ross Shimmon
Secretary General
IFLA
The Hague
3 September 2001

Latest Revision: *September 11, 2001*

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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IMPORTANT ADDRESSES

List of Participants

(Status: 8 August 2001)

Please note that this is the list of participants as per August 8, 2001. The information below is preliminary and subject to change. Please do not call the Conference Secretariat if your name is not yet on this list as your registration may be processed at this moment.

Pre-Registration is now closed. New registrations, amendments and other issues related to the 67th IFLA Conference can be made on site at the registration desk in the Hynes Convention Center as from Friday, August 17, 2001 noon.

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- Fuchs, Heinz, GERMANY
- Geisselmann, Friedrich, GERMANY
- Glashoff, Ilona, GERMANY
- Gompel, Renate, GERMANY
- Griepke, Gertraud, GERMANY
- Häseker, Helga, GERMANY
- Hengel, Christel, GERMANY
- Hilberer, Thomas, GERMANY
- Hobohm, Hans-Christoph, GERMANY
- Homann, Benno, GERMANY
- Hoyer, Ruediger, GERMANY
- Kempf, Klaus, GERMANY
- Kunz, Martin, GERMANY
- Linder, Monika, GERMANY
- Lux, Claudia, GERMANY
- Muehlfeld, Kalina, GERMANY
- Muennich, Monika, GERMANY
- Neuroth, Heike, GERMANY

- Niggemann, Elisabeth, GERMANY
- Plassard, Marie-France, GERMANY
- Poll, Roswitha, GERMANY
- Rosemann, Uwe, GERMANY
- Rusch-Feja, Diann, GERMANY
- Schleihagen, Barbara, GERMANY
- Schubert, Hans-Jürgen, GERMANY
- Schwarz, Helga, GERMANY
- Schwersky, Uwe, GERMANY
- Sobottke, Ingeborg, GERMANY
- Stephan, Werner, GERMANY
- Strack-Zimmermann, Eva, GERMANY
- Stummeyer, Sabine, GERMANY
- Tobias, Regine, GERMANY
- von Roell, Barbara, GERMANY
- Wagner, Bettina, GERMANY
- Walravens, Hartmut, GERMANY
- Warmbrunn, Juergen, GERMANY
- Wehmeyer, Annette, GERMANY
- Wellems, Christine W., GERMANY
- Werner, Claudia, GERMANY
- Wessel, Carola, GERMANY
- Willke, Udo, GERMANY
- Amadushaibu, Walieyae, GHANA
- Annoh-Quarshie, Samson, GHANA
- Arkaifie, Richard, GHANA
- Asumadu, Alexander, GHANA
- Asumadu, Benjamin, GHANA
- Ato-Dadzie, Pastor Emmanuel, GHANA
- Dapaah, Charles, GHANA
- Dodoo, Victoria, GHANA
- Hanson, Gifty, GHANA
- Kittoe, Patrick, GHANA
- Kommey, Randy Emmanuel, GHANA
- Martey, Alfred Kwasi, GHANA
- Mensah Brayie, Maxwell, GHANA
- Mohammed, Abubakar, GHANA
- Nti-Boadu, Kwadwo, GHANA
- Yeboah, Kwame Boamah, GHANA
- Amiraly, Eleni, GREECE
- Dai, Panagiota Yolanda, GREECE
- Horemi-Thomopoulou, Eirini, GREECE
- Kavadias, Angele Lucie, GREECE

- Lappa, Litsa, GREECE
- Mendrinos, Jolene, GREECE
- Mitrakou, Eleni, GREECE
- Papamattheou, Constantinos, GREECE
- Papazoglou, Alexandra, GREECE
- Papazoglou, Vassilis, GREECE
- Sfakianaki, Christina, GREECE
- Syroglou-Bouki, Vassiliki Athena, GREECE
- Cohen, Arlene, GUAM
- Peren Curruchiche, Anabella Pilar, GUATEMALA
- Polo-Sifontes, Francis Ramon, GUATEMALA
- Zamora, Rigoberto, GUATEMALA
- Abdoulaye, Kebe, GUINEA
- Habib, Tall, GUINEA
- Siaka, Sanoh, GUINEA
- Djalo, Iaguba, GUINEA-BISSAU
- Beauchamp, Marie Cornelia, HAITI
- Dorsainvil, Franck-Gilles, HAITI
- Thybulle, Francoise, HAITI
- Piazzoni, Ambrogio M, HOLY SEE (VATICAN CITY STATE)
- Reyes Hernadez, Oscar René, HONDURAS
- Balogh, Anna, HUNGARY
- Dippold, Peter, HUNGARY
- Gazdag, Elizabeth, HUNGARY
- Haraszti, Palne, HUNGARY
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- Jonasdottir, Erla Kristin, ICELAND
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- Kumar, Balwinder, INDIA
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- Singh, N.K., INDIA
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- Venugopal, Srinivasan, INDIA
- Chalid, Widya, INDONESIA
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- Irawan, Ferry, INDONESIA
- Qonitah, Hani, INDONESIA
- Suhartati, Novi, INDONESIA
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- Arian, Giti, IRAN, ISLAMIC REPUBLIC OF
- Ashraf Emami, Nayereh, IRAN, ISLAMIC REPUBLIC OF
- Assadi Anjileh, Mojtaba, IRAN, ISLAMIC REPUBLIC OF
- Chizari, Haydeh, IRAN, ISLAMIC REPUBLIC OF
- Emamian Rad, Iman, IRAN, ISLAMIC REPUBLIC OF
- Gordgiran, Shahram, IRAN, ISLAMIC REPUBLIC OF
- Heydari, Guiti, IRAN, ISLAMIC REPUBLIC OF
- Hojjati, Franak, IRAN, ISLAMIC REPUBLIC OF
- Jafar-Nejad, Atash, IRAN, ISLAMIC REPUBLIC OF
- Khadivi, Shahnaz, IRAN, ISLAMIC REPUBLIC OF
- Khosravi, Fariborz, IRAN, ISLAMIC REPUBLIC OF
- Lotfi, Mahrokh, IRAN, ISLAMIC REPUBLIC OF
- Mirsaeid, Azin Ghazi, IRAN, ISLAMIC REPUBLIC OF
- Mirshahzadeh, Ashraf-al-sadat, IRAN, ISLAMIC REPUBLIC OF
- Moeinfar, Mehdi, IRAN, ISLAMIC REPUBLIC OF
- Moradi Garakani, Nourollah, IRAN, ISLAMIC REPUBLIC OF
- Neshat Shemirani, Narges, IRAN, ISLAMIC REPUBLIC OF
- Parsa, Farzaneh, IRAN, ISLAMIC REPUBLIC OF
- Pashaee Fam, Ramin, IRAN, ISLAMIC REPUBLIC OF

- Pazouki, Mehdi, IRAN, ISLAMIC REPUBLIC OF
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- Seifkashani, Zahra, IRAN, ISLAMIC REPUBLIC OF
- Shahzadeh Arani, Hassan, IRAN, ISLAMIC REPUBLIC OF
- Shokouh-amiri, Fouzieh, IRAN, ISLAMIC REPUBLIC OF
- Siamian, Hasan, IRAN, ISLAMIC REPUBLIC OF
- Tabesh, Ahmad, IRAN, ISLAMIC REPUBLIC OF
- Taghizadieh, Aghdas, IRAN, ISLAMIC REPUBLIC OF
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- Zargham, Nosratollah, IRAN, ISLAMIC REPUBLIC OF
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- Sliney, Marjory, IRELAND
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- Chai, Iris, ISRAEL
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- Lamaro, Emilia, ITALY
- Lazzari, Giovanni, ITALY
- Magliano, Cristina, ITALY
- Minetto, Sonia, ITALY
- Ornella, Foglieni, ITALY
- Santarsiero, Marisa, ITALY
- Santucci, Natalia Susanna, ITALY
- Tafuri Di Melignano, Maria Teresa, ITALY
- Wu, Jane Mary, ITALY
- Amenu-Kpodo, Norma, JAMAICA
- Brown, Enid, JAMAICA

- Cousins, Cheryl, JAMAICA
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- Runcie, Rosemarie, JAMAICA
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- Salmon, Hermine C., JAMAICA
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- Harada, Yasuhiro, JAPAN
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- Kikuchi, Yu, JAPAN
- Kim, Yong Won, JAPAN
- Kimura, Kiyomi, JAPAN
- Kurihara, Tooru, JAPAN
- Matsumura, Tamiko, JAPAN
- Miyaji, Yuriko, JAPAN
- Miyazaki, Makiko, JAPAN
- Naito, Eisuke, JAPAN
- Nakayama, Emiko, JAPAN
- Oba, Toshiyasu, JAPAN
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- Sakamoto, Jun, JAPAN
- Sugata, Kiyoko, JAPAN
- Sugimori, Hiroko, JAPAN
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- Takahashi, Ryuichiro, JAPAN
- Takashima, Ryoko, JAPAN
- Takawashi, Tadayoshi, JAPAN
- Takeda, Michiyo, JAPAN
- Tanaka, Azusa, JAPAN
- Tanaka, Hisanori, JAPAN
- Tomita, Mikiko, JAPAN
- Toyoda, Kae, JAPAN
- Ujigo, Tsuyo Shi, JAPAN
- Watabe, Yukio, JAPAN

- Yamanaka, Michiko, JAPAN
- Yamaya, Hiromi, JAPAN
- Yuri, Noriko, JAPAN
- Foudeh, Helmi M., JORDAN
- Quider, Lina, JORDAN
- Berdigaliyeva, Rosa, KAZAKSTAN
- Kvochkina, Olga, KAZAKSTAN
- Shaimardanova, Zarema, KAZAKSTAN
- Anyenda, Francis, KENYA
- Iga, Mary Goretti, KENYA
- Kidei, Jane Grace, KENYA
- Mwanzilo, Paul K., KENYA
- Ng'ang'a, Stanley, KENYA
- Nyamato, Roselyn, KENYA
- Omole, Duncan, KENYA
- Rasugu, Flora, KENYA
- Shibanda, George Gundu, KENYA
- Were, Jacinta, KENYA
- Yegon, Elizabeth, KENYA
- Ann, Hye Kyoung, KOREA, REPUBLIC OF
- Baek, Inhwa, KOREA, REPUBLIC OF
- Bang, Jun Pil, KOREA, REPUBLIC OF
- Chang, Se-Hoon, KOREA, REPUBLIC OF
- Chang, Soon Yi, KOREA, REPUBLIC OF
- Choi, Moon-Hyu, KOREA, REPUBLIC OF
- Chung, Ae Hee, KOREA, REPUBLIC OF
- Chung, Gye Sook, KOREA, REPUBLIC OF
- Chung, Jae Young, KOREA, REPUBLIC OF
- Han, Joung Suk, KOREA, REPUBLIC OF
- Han, Mi-Tok, KOREA, REPUBLIC OF
- Han, Myeong Won, KOREA, REPUBLIC OF
- Hwang, Myun, KOREA, REPUBLIC OF
- Hwang, Yen Sub, KOREA, REPUBLIC OF
- Jang, Eun Hee, KOREA, REPUBLIC OF
- Jung, Jae Kyung, KOREA, REPUBLIC OF
- Kang, Seon Ju, KOREA, REPUBLIC OF
- Kang, Soon Ae, KOREA, REPUBLIC OF
- Kang, Suck Kwan, KOREA, REPUBLIC OF
- Key, Min Ho, KOREA, REPUBLIC OF
- Kim, Chong Eun, KOREA, REPUBLIC OF
- Kim, Chung Shin, KOREA, REPUBLIC OF
- Kim, Eun Ja, KOREA, REPUBLIC OF
- Kim, Hak Jin, KOREA, REPUBLIC OF

- Kim, Hee Kwen, KOREA, REPUBLIC OF
- Kim, Jang Won, KOREA, REPUBLIC OF
- Kim, Yong Wook, KOREA, REPUBLIC OF
- Ko, Min Chul, KOREA, REPUBLIC OF
- Lee, Jae Sun, KOREA, REPUBLIC OF
- Lee, Jeong Sang, KOREA, REPUBLIC OF
- Lee, Jinsook, KOREA, REPUBLIC OF
- Lee, Ki Soo, KOREA, REPUBLIC OF
- Lee, Mihwa, KOREA, REPUBLIC OF
- Lee, Pyung Woo, KOREA, REPUBLIC OF
- Lee, Sook Hyeun, KOREA, REPUBLIC OF
- Lee, Un Bai, KOREA, REPUBLIC OF
- Lee, Yong Hun, KOREA, REPUBLIC OF
- Lee, Yong Nam, KOREA, REPUBLIC OF
- Lee, Yun Jung, KOREA, REPUBLIC OF
- Moon, Dong Sik, KOREA, REPUBLIC OF
- Moon, Young il, KOREA, REPUBLIC OF
- Mun, Jin Soo, KOREA, REPUBLIC OF
- Noh, Kyung Ran, KOREA, REPUBLIC OF
- Oh, Jeong Hoon, KOREA, REPUBLIC OF
- Park, Chong Keun, KOREA, REPUBLIC OF
- Park, Eun-Bong, KOREA, REPUBLIC OF
- Park, Jeong Soon, KOREA, REPUBLIC OF
- Park, Sungchul, KOREA, REPUBLIC OF
- Shin, Hyun-Taek, KOREA, REPUBLIC OF
- Shin, Ki Nam, KOREA, REPUBLIC OF
- Song, Nam Seob, KOREA, REPUBLIC OF
- Yoo, Hyun Jin, KOREA, REPUBLIC OF
- Yoo, Jae-Ok, KOREA, REPUBLIC OF
- Yoon, Jeong Hwan, KOREA, REPUBLIC OF
- Al-Awadhi, Eiman, KUWAIT
- Al-Othaimeen, Ekbal, KUWAIT
- Alqudsi-Ghabra, Taghreed, KUWAIT
- Chinibaeva, Anara, KYRGYZSTAN
- Davletyarova, Nurila, KYRGYZSTAN
- Poiarkova, Marianna, KYRGYZSTAN
- Shaimergenova, Tamara, KYRGYZSTAN
- Shapovalov, Igor, KYRGYZSTAN
- Shapovalova, Elmira, KYRGYZSTAN
- Sultangazieva, Roza, KYRGYZSTAN
- Suyunalieva, Zuura, KYRGYZSTAN
- Togonbaeve, Baktygue, KYRGYZSTAN
- Souphanh, Detmahinh, LAO PEOPLE'S DEMOCRATIC

REPUBL

- Buholte, Agnese, LATVIA
- Dudina, Anita, LATVIA
- Linina, Silvija, LATVIA
- Maulina, Anna, LATVIA
- Nadzina, Aija, LATVIA
- Plota, Sandra, LATVIA
- Vekshina, Irina, LATVIA
- Vilks, Andris, LATVIA
- Zoldnere, Ausma, LATVIA
- Abdallah, Cendrella, LEBANON
- Bachir, Imad, LEBANON
- Farha, Aida, LEBANON
- Husseiny, Yomna, LEBANON
- Nassar, Hilda T., LEBANON
- Sary, Diana, LEBANON
- Tarhini, Amal, LEBANON
- Feret, Blazej, LIECHTENSTEIN
- Segbert, Monika, LIECHTENSTEIN
- Butkeviciene, Birute, LITHUANIA
- Karliene, Danute, LITHUANIA
- Mackevicius, Kazys, LITHUANIA
- Varniene, Regina, LITHUANIA
- Hoffmann, Caroline, LUXEMBOURG
- Kieffer, Monique, LUXEMBOURG
- Gilevski, Paskal, MACEDONIA, FORMER YUGOSLAV REP
- Jankoska, Stana, MACEDONIA, FORMER YUGOSLAV REP
- Mbeya, Harry, MALAWI
- Abang Ismail, Dayang Zarina, MALAYSIA
- Abdul Hadi, Nik Mohd Azlan, MALAYSIA
- Abdul Karim, Yahya, MALAYSIA
- Abdul Samad, Ramli, MALAYSIA
- Albert, Geeta, MALAYSIA
- Ali, Othman Hisham, MALAYSIA
- Baba, Zawiyah, MALAYSIA
- Ibrahim, Korina, MALAYSIA
- Ibrahim, Zainab, MALAYSIA
- Idris, Paiza, MALAYSIA
- Masrah, Abidin, MALAYSIA
- Mohamed, Jamilah, MALAYSIA
- Mohd Amin, Maimunah, MALAYSIA
- Muhiddin, Roslin, MALAYSIA
- Ong, Joo Bee, MALAYSIA

- Othman, Rahimah, MALAYSIA
- Raduan, Siti Salbiah, MALAYSIA
- Ramli, Siti Sumaizan, MALAYSIA
- Rashidah, Begum, MALAYSIA
- Roman, Grace, MALAYSIA
- Rosidah, Mohamed, MALAYSIA
- Sabil, Hayati, MALAYSIA
- Sheik Said, Riza Feisal, MALAYSIA
- Sulaiman, Abdul Wahid, MALAYSIA
- Tuining, Joyce, MALAYSIA
- Yahya, Abdul Karim, MALAYSIA
- Yang Rashdi, Noor Ida, MALAYSIA
- Diaw, Boubacar, MALI
- Bore, Philip, MALTA
- Bernabe, Marie-Francoise, MARTINIQUE
- Ancira Jimenez, Sara, MEXICO
- Arevalo Guzman, Gerardo, MEXICO
- Ascencio Baca, Gerardo, MEXICO
- Assefa, Shimelis, MEXICO
- Barberena, Elsa, MEXICO
- Caballero, Jose Juan, MEXICO
- Castro, Martha D., MEXICO
- Cortes, Jesus, MEXICO
- Cota Romo, Martin Alonso, MEXICO
- Endean Gamboa, Robert, MEXICO
- Espinoza Valenzuela, Petra, MEXICO
- Fernandez de Zamora, Rosa Maria, MEXICO
- Flores Rocha, Dora Alicia, MEXICO
- Flores Saucedo, Martina Patricia, MEXICO
- Garcia, Francisco Javier, MEXICO
- Gomez Serrano, Monica, MEXICO
- Guerrero, Elda Monica, MEXICO
- Hernandez Zaragoza, Maria Victoria, MEXICO
- Lau, Jesus, MEXICO
- Martinez Barrientos, Felix J., MEXICO
- Mendoza Galloso, Maria Candelaria, MEXICO
- Morales, Estela, MEXICO
- Morales, Valentino, MEXICO
- Moya Grijalva, Ana Lilian, MEXICO
- Quirarte, Vicente, MEXICO
- Ramirez Leyva, Elsa Margarita, MEXICO
- Rodriguez Gallardo, Adolfo, MEXICO
- Rodriguez Perez, Rosa Maria, MEXICO

- Torres Rivera, Lorena Isabel, MEXICO
- Vazquez Sanchez, Maria Magdalena, MEXICO
- Villegas Tovar, Ricardo, MEXICO
- Ala, Susarenco, MOLDOVA, REPUBLIC OF
- Alecsandri, Mariana, MOLDOVA, REPUBLIC OF
- Ataman, Vera, MOLDOVA, REPUBLIC OF
- Caraus, Ruslan, MOLDOVA, REPUBLIC OF
- Dermenji, Rodica, MOLDOVA, REPUBLIC OF
- Dolinta, Zinaida, MOLDOVA, REPUBLIC OF
- Draganel, Angela, MOLDOVA, REPUBLIC OF
- Osoianu, Vera, MOLDOVA, REPUBLIC OF
- Sochirca, Zinaida, MOLDOVA, REPUBLIC OF
- Susarenco, Ala, MOLDOVA, REPUBLIC OF
- Zinaida, Sochirca, MOLDOVA, REPUBLIC OF
- Choi, Altantsetseg, MONGOLIA
- Munkh-Ochir, Sarantsataral, MONGOLIA
- Odonchimeg, Borkhuu, MONGOLIA
- Serdamba, Oyuntuya, MONGOLIA
- Sharav, Ulamsaikhan, MONGOLIA
- Tsagaach, Naidan, MONGOLIA
- Tumenbaater, Tumurbat, MONGOLIA
- Zhambaldorj, Serjee, MONGOLIA
- Benslimane, Mouna, MOROCCO
- Hachad, Nazha, MOROCCO
- Idoubba, Ahmed, MOROCCO
- Thet Mar, Thet, MYANMAR
- Loubser, Johannes, NAMIBIA
- Mlambo, Charles, NAMIBIA
- Tsuseb, Gottfriedt, NAMIBIA
- Basaula, Gopal Prasad, NEPAL
- Gurung, Ganesh Bahadur, NEPAL
- Niraola, Ambika Prasad, NEPAL
- Bakker, Trix, NETHERLANDS
- Block, Jos de, NETHERLANDS
- Blom, Aart, NETHERLANDS
- Bodengraven, Marijke van, NETHERLANDS
- Bos, Jan, NETHERLANDS
- Bouwens, Magda, NETHERLANDS
- Buijtenen, Marcel van, NETHERLANDS
- Calff, Josine, NETHERLANDS
- Dellaert, Jacqueline, NETHERLANDS
- Dittrich, Peter Uwe, NETHERLANDS
- Drimmelen, Wim van, NETHERLANDS

- Duyker, Eduard, NETHERLANDS
- Epping, Cor, NETHERLANDS
- Felföldi, Sophie, NETHERLANDS
- Fernandez Garza, Jorge H., NETHERLANDS
- Gilbert, John, NETHERLANDS
- Halm, Johan van, NETHERLANDS
- Heijligers, Antonius M.J.T., NETHERLANDS
- Hubert, Albert J.B., NETHERLANDS
- Jansen, Hans, NETHERLANDS
- Keukens, Jan, NETHERLANDS
- Klaverstijn, Robert B., NETHERLANDS
- Klugkist, Alex, NETHERLANDS
- Kooi, Auke F. van der, NETHERLANDS
- Koopman, Sjoerd, NETHERLANDS
- Koot, Geert-Jan, NETHERLANDS
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- Lubeek, Eric van, NETHERLANDS
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- Moree, Perry, NETHERLANDS
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- Schut, Daniel, NETHERLANDS
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- Trier, Gerard van, NETHERLANDS
- Tucker, Richard, NETHERLANDS
- Verschoor, Dini, NETHERLANDS
- Verwayen, Harry, NETHERLANDS
- Voogd, Lourina, NETHERLANDS
- Werf, Titia van der, NETHERLANDS
- Wolf, Clemens de, NETHERLANDS

- Hodge, Blanca, NETHERLANDS ANTILLES
- Blake, Christopher, NEW ZEALAND
- Cullen, Rowena, NEW ZEALAND
- Dorner, Daniel George, NEW ZEALAND
- Fraser, Moira, NEW ZEALAND
- Gorman, Gary E., NEW ZEALAND
- Howell, Geraldine, NEW ZEALAND
- Mohi, John H., NEW ZEALAND
- Perrone, Vye, NEW ZEALAND
- Robbins, Jenny, NEW ZEALAND
- Smith, Alan, NEW ZEALAND
- Aleman, Ana Alejandra, NICARAGUA
- Alvarado Moreno, Jimy Virgilio, NICARAGUA
- Afolayan, Sunday Ademola, NIGERIA
- Alegbeleye, Gabriel Oluwabunmi, NIGERIA
- Atinmo, Morayo, NIGERIA
- Bello, Prince Aderemi, NIGERIA
- Dada, Abimbola, NIGERIA
- Daniel, James O., NIGERIA
- Fadale, Adekunle, NIGERIA
- George, Adeola, NIGERIA
- Ibrahim, Abdullahi, NIGERIA
- Idahosa, Patricia, NIGERIA
- Jegede, Oluremi, NIGERIA
- Jimba, Samuel Wodi, NIGERIA
- Komolafe, Janet, NIGERIA
- Mmanabor, Benjamin S., NIGERIA
- Nwankwo, Hope, NIGERIA
- Nwude, Chy Edith, NIGERIA
- Odinakachukwu, Hon. Azionu Jude, NIGERIA
- Ogunbanwo, Adenike, NIGERIA
- Okojie, Victoria, NIGERIA
- Oladipo, Faderera Olalekan, NIGERIA
- Omekwu, Charles, NIGERIA
- Omolayole, Olayemi, NIGERIA
- Onwukwe, Spencer, NIGERIA
- Seydoux, Henriette, NIGERIA
- Shehu, Rakiya, NIGERIA
- Sokefun, Olusola, NIGERIA
- Aase, Magnhild Boyum, NORWAY
- Abelsnes, Kristine, NORWAY
- Andersen, Tore, NORWAY
- Andreassen, Bente R., NORWAY

- Audunson, Ragaar Andreas, NORWAY
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- Cromarty, Jacqueline, UNITED KINGDOM
- Cropper, Barry, UNITED KINGDOM
- Cuninghame, Keith, UNITED KINGDOM
- Danskin, Alan, UNITED KINGDOM
- Davies, Gay, UNITED KINGDOM
- Davies, James Eric, UNITED KINGDOM
- de Souza, Yvette, UNITED KINGDOM
- de Verteuil, Sue, UNITED KINGDOM
- Drury, Russell, UNITED KINGDOM
- Dunne, John, UNITED KINGDOM
- Dunsire, Gordon, UNITED KINGDOM
- Edwards, Winsome, UNITED KINGDOM
- Elkin, Judith, UNITED KINGDOM
- Elliot, James Douglas, UNITED KINGDOM
- Evans, Paul, UNITED KINGDOM
- Faulkner, Marie, UNITED KINGDOM
- Fish, Wendy, UNITED KINGDOM

- Gill, Philip, UNITED KINGDOM
- Godbolt, Shane, UNITED KINGDOM
- Gould, Sara, UNITED KINGDOM
- Green, Andrew, UNITED KINGDOM
- Guy, Fred, UNITED KINGDOM
- Halliday, Caroline, UNITED KINGDOM
- Hamilton, Gill, UNITED KINGDOM
- Hasson, Alan, UNITED KINGDOM
- Heaney, Michael, UNITED KINGDOM
- Hopkinson, Alan, UNITED KINGDOM
- Hunter, John, UNITED KINGDOM
- James, Stuart, UNITED KINGDOM
- Jefcoate, Graham, UNITED KINGDOM
- Johnson, Ian, UNITED KINGDOM
- Johnston, Alastair R., UNITED KINGDOM
- Keene, Judith, UNITED KINGDOM
- Kempster, Grace, UNITED KINGDOM
- Key, Andrea, UNITED KINGDOM
- Lake, John, UNITED KINGDOM
- Latimer, Karen, UNITED KINGDOM
- Law, Derek, UNITED KINGDOM
- Layzell Ward, Patricia, UNITED KINGDOM
- Lees, Ann, UNITED KINGDOM
- Lees, Janet, UNITED KINGDOM
- Leith, Ian, UNITED KINGDOM
- Lemaire, Kathy, UNITED KINGDOM
- Liebster, Janet, UNITED KINGDOM
- Line, Maurice, UNITED KINGDOM
- Mann, David, UNITED KINGDOM
- Martin, Jill, UNITED KINGDOM
- Massil, Stephen W., UNITED KINGDOM
- May, Peter, UNITED KINGDOM
- McCarron, Louise, UNITED KINGDOM
- McGowan, Ian, UNITED KINGDOM
- McIlwaine, Ia Cecilia, UNITED KINGDOM
- McIlwaine, John, UNITED KINGDOM
- McKee, Bob, UNITED KINGDOM
- McKenzie, Amelia, UNITED KINGDOM
- McNab, Alison, UNITED KINGDOM
- Meriton, John Cyprian, UNITED KINGDOM
- Milligan, Marilyn, UNITED KINGDOM
- Milne, Ronald, UNITED KINGDOM
- Minns, Alison, UNITED KINGDOM

- Mitchell, Muriel, UNITED KINGDOM
- Molloy, Traude, UNITED KINGDOM
- Morris, Anne, UNITED KINGDOM
- Mosson, Alex, UNITED KINGDOM
- Naylor, Bernard, UNITED KINGDOM
- Newton, Karen, UNITED KINGDOM
- Norman, Sandy, UNITED KINGDOM
- Palmer, Rob, UNITED KINGDOM
- Pateman, John, UNITED KINGDOM
- Pickles, Jenny, UNITED KINGDOM
- Priestley, Carol, UNITED KINGDOM
- Rawson, Nicholas, UNITED KINGDOM
- Rigny, Sophie, UNITED KINGDOM
- Roberts, Rachel, UNITED KINGDOM
- Royan, Bruce, UNITED KINGDOM
- Russ, Hagan, UNITED KINGDOM
- Russell, Bill, UNITED KINGDOM
- Ryan, Patrick, UNITED KINGDOM
- Seaton, Janet, UNITED KINGDOM
- Shenton, Helen, UNITED KINGDOM
- Shorley, Deborah, UNITED KINGDOM
- Slavic, Aida, UNITED KINGDOM
- Sommer, David, UNITED KINGDOM
- Stevens, Keith Richard, UNITED KINGDOM
- Street, Penelope, UNITED KINGDOM
- Stringer, Ian, UNITED KINGDOM
- Thompson, Joan, UNITED KINGDOM
- Train, Briony, UNITED KINGDOM
- Turfan, Barbara, UNITED KINGDOM
- Tye, Margaret, UNITED KINGDOM
- Ugonna, Judy, UNITED KINGDOM
- Usher, Karen, UNITED KINGDOM
- Usherwood, Robert, UNITED KINGDOM
- Varley, Gillian, UNITED KINGDOM
- Vickery, Jim, UNITED KINGDOM
- Wade, Martyn, UNITED KINGDOM
- Wale, Andrew, UNITED KINGDOM
- Walker, Audrey, UNITED KINGDOM
- Willars, Glenys, UNITED KINGDOM
- Williams, Alec, UNITED KINGDOM
- Wright, Julie, UNITED KINGDOM
- Young, Margaret, UNITED KINGDOM
- Abid, Abdelaziz, UNITED NATIONS

- Bordcosh, Rima, UNITED NATIONS
- Leneman, Nina Kriz, UNITED NATIONS
- Matsuura, Koichiro, UNITED NATIONS
- Queau, Philippe, UNITED NATIONS
- Tabu-Ley, Pascal, UNITED NATIONS
- Vazquez, Lilia, UNITED NATIONS
- Zhang, Kangsheng, UNITED NATIONS
- Abad, Ramon, UNITED STATES
- Abbott, George, UNITED STATES
- Abdulla, Ali, UNITED STATES
- Abdullani, Ismail, UNITED STATES
- Abraham, Deborah, UNITED STATES
- Addison, Deborah, UNITED STATES
- Adelman, Jean, UNITED STATES
- Adlum, Margaret, UNITED STATES
- Akeroyd, Richard, UNITED STATES
- Albrecht, Cheryl, UNITED STATES
- Alford, Thomas, UNITED STATES
- Aliprand, Joan, UNITED STATES
- Allen, Susan M., UNITED STATES
- Allenbach-Schmidt, Norma, UNITED STATES
- Alvarez, Jaquelina Ester, UNITED STATES
- Ammen, Mary, UNITED STATES
- Anderson, Mary Gay, UNITED STATES
- Anderson, Nancy D., UNITED STATES
- Anderson, Phyllis Genene, UNITED STATES
- Anderson, William, UNITED STATES
- Anghelescu, Hermina G.B., UNITED STATES
- Anthes, Harriet, UNITED STATES
- Anton, Stephanie, UNITED STATES
- Argentati, Carolyn, UNITED STATES
- Armstrong, Jeanne, UNITED STATES
- Armstrong, Kimberly, UNITED STATES
- Arnold, Bruce, UNITED STATES
- Arsenault, Clement, UNITED STATES
- Atkins, Helen, UNITED STATES
- Auston, Ione, UNITED STATES
- Babb, Susan, UNITED STATES
- Babyak, Becky, UNITED STATES
- Baden, Diane, UNITED STATES
- Bader, Emily, UNITED STATES
- Baish, Mary Alice, UNITED STATES
- Balay, Robert, UNITED STATES

- Balderrama, Sandra Rios, UNITED STATES
- Banach, Patricia, UNITED STATES
- Bariciauskas, Jonas, UNITED STATES
- Barnett, Charles William, UNITED STATES
- Barry, Bill, UNITED STATES
- Bartlett, Becky, UNITED STATES
- Baruth, Christopher, UNITED STATES
- Basinska, Ewa Maria, UNITED STATES
- Baumbach, Joyce, UNITED STATES
- Bazuzi, Jack, UNITED STATES
- Beall, Julianne, UNITED STATES
- Bell, Barbara, UNITED STATES
- Bellinger, Meg, UNITED STATES
- Benavente, Nelida, UNITED STATES
- Bender, David R., UNITED STATES
- Benenfeld, Alan, UNITED STATES
- Benson, Amy, UNITED STATES
- Berard, Lynn, UNITED STATES
- Berlin, Charles, UNITED STATES
- Berman, Mary, UNITED STATES
- Bernstein, Judith, UNITED STATES
- Berry, John W., UNITED STATES
- Berry, Kathleen, UNITED STATES
- Bertolucci, Ysabel, UNITED STATES
- Biblarz, Dora, UNITED STATES
- Biblo, Herbert, UNITED STATES
- Biblo, Mary, UNITED STATES
- Billington, James, UNITED STATES
- Bingham, Elizabeth, UNITED STATES
- Bingham, Rebecca, UNITED STATES
- Bishop, Robin, UNITED STATES
- Bjorner, Susanne, UNITED STATES
- Blackburn, Janette, UNITED STATES
- Bloss, Marjorie, UNITED STATES
- Bohrer, Clara, UNITED STATES
- Bolt, Nancy, UNITED STATES
- Boone, Cecelia, UNITED STATES
- Boorkman, Jo Anne, UNITED STATES
- Borecka, Aleksandra, UNITED STATES
- Born, Pamela, UNITED STATES
- Bostick, Sharon, UNITED STATES
- Boyson, Beth, UNITED STATES
- Bradbury, Scott, UNITED STATES

- Brady, Eileen, UNITED STATES
- Branden, Shirley, UNITED STATES
- Breen, Joanell, UNITED STATES
- Brennan, Deirdre, UNITED STATES
- Brink, Judith, UNITED STATES
- Brisson, Roger, UNITED STATES
- Brown, Carolyn, UNITED STATES
- Brown, Elizabeth, UNITED STATES
- Brown, Gloria, UNITED STATES
- Brumfield, Elizabeth, UNITED STATES
- Brynteson, Susan, UNITED STATES
- Bucy, Mary, UNITED STATES
- Budd, John, UNITED STATES
- Budris, Danguole, UNITED STATES
- Burke, Geraldine V., UNITED STATES
- Buzzell, Bonnie, UNITED STATES
- Byrum, John, UNITED STATES
- Cahalan, Brigid, UNITED STATES
- Calabrese, Alice, UNITED STATES
- Caldwell, Heather, UNITED STATES
- Calhoun, Patrick, UNITED STATES
- Calloway, Gregory, UNITED STATES
- Calpestri, Suzanne, UNITED STATES
- Campbell, Laura, UNITED STATES
- Cannon, Marcia, UNITED STATES
- Canto, Candaci, UNITED STATES
- Cappuzzello, Paul, UNITED STATES
- Carbo, Toni, UNITED STATES
- Carlin, Jane, UNITED STATES
- Carr, Alan, UNITED STATES
- Carr, Mary, UNITED STATES
- Carter, Ruth, UNITED STATES
- Carty, Dianne, UNITED STATES
- Cascante Ardon, Priscilla, UNITED STATES
- Cassell, Kay, UNITED STATES
- Castellano, Guillermina, UNITED STATES
- Celli, John, UNITED STATES
- Chachra, Krisha, UNITED STATES
- Chachra, Vinod, UNITED STATES
- Challinor, Joan, UNITED STATES
- Champlin, Maria, UNITED STATES
- Chan Drasekhar, Ratna, UNITED STATES
- Chan, Lois Mai, UNITED STATES

- Chang, Sheau-Hwang, UNITED STATES
- Chang, Stella, UNITED STATES
- Chapa, Teresa, UNITED STATES
- Chatham, Donald, UNITED STATES
- Chattoo, Calmer, UNITED STATES
- Chavez-Hernandez, Maria T., UNITED STATES
- Cheng, James, UNITED STATES
- Cheng, Rachel, UNITED STATES
- Christou, Corilee, UNITED STATES
- Chun, Karen, UNITED STATES
- Ciccone, Amy, UNITED STATES
- Cisler, Steve, UNITED STATES
- Clark, Barton, UNITED STATES
- Clark, Larra, UNITED STATES
- Clark, Sharon, UNITED STATES
- Cline, Nancy, UNITED STATES
- Clough, Jeanette M., UNITED STATES
- Cobb, David, UNITED STATES
- Cockrum, Frances, UNITED STATES
- Coe, Whitney, UNITED STATES
- Coelho, Marilda, UNITED STATES
- Coffee, William, UNITED STATES
- Cohn, John, UNITED STATES
- Cole, Barbara, UNITED STATES
- Cole, John Y., UNITED STATES
- Collins, John, UNITED STATES
- Conaty, Barbara, UNITED STATES
- Condon, Joyce, UNITED STATES
- Conner, Roz, UNITED STATES
- Coraggio, Mary-Deirdre, UNITED STATES
- Coulombe, Dominique, UNITED STATES
- Craig, Anne, UNITED STATES
- Crawley, Martha, UNITED STATES
- Crohan, Catherine, UNITED STATES
- Crosby, Sally, UNITED STATES
- Cunningham, Robert, UNITED STATES
- Dacontur Bia, Sandra, UNITED STATES
- Dahlgren, Anders C., UNITED STATES
- D'Almeida, Diane, UNITED STATES
- Dalrymple, Prudence, UNITED STATES
- Damon, Janet, UNITED STATES
- Danczak-Lyons, Karen, UNITED STATES
- Daniel, Anita, UNITED STATES

- Daniel, Evelyn, UNITED STATES
- Darling, Karen, UNITED STATES
- Daum, Marilen, UNITED STATES
- Davenport, Nancy, UNITED STATES
- David, Pier, UNITED STATES
- Davis, Cathy, UNITED STATES
- Davis, Deborah, UNITED STATES
- Davis, Denise, UNITED STATES
- Davis, Donald, UNITED STATES
- Dawson, Victoria, UNITED STATES
- Day, John, UNITED STATES
- Decker Smith, Sally, UNITED STATES
- Dede, Bonnie A., UNITED STATES
- Delany, Carol, UNITED STATES
- DesJardins, Andrea, UNITED STATES
- Devenish, Ann, UNITED STATES
- Dewey, Barbara, UNITED STATES
- Diamant-Cohen, Betsy, UNITED STATES
- Diamond, Lucia, UNITED STATES
- Dibble, Katherine, UNITED STATES
- Dibble, Mark, UNITED STATES
- Dickinson, Sarah, UNITED STATES
- Dickson, Lance, UNITED STATES
- Diercks, Thelma, UNITED STATES
- Dietrich, Lyn, UNITED STATES
- Dietz, Roland, UNITED STATES
- Dill, Elizabeth, UNITED STATES
- Dillon, Theresa, UNITED STATES
- Dimattia, Ernest A., UNITED STATES
- DiMattia, Susan, UNITED STATES
- Dimunation, Mark, UNITED STATES
- Dixon, Jeanette, UNITED STATES
- Dole, Wanda, UNITED STATES
- Dorr, John, UNITED STATES
- Dowling, Michael, UNITED STATES
- Doyle, Robert P., UNITED STATES
- Duggan, Cheryl, UNITED STATES
- Duke, Judith, UNITED STATES
- Dulabahn, Elizabeth, UNITED STATES
- Dupler, Michael, UNITED STATES
- Dupont, Jerry, UNITED STATES
- Durbin, Roger, UNITED STATES
- Durkin, Kevin R., UNITED STATES

- East, Kathy, UNITED STATES
- Eaton, Elizabeth, UNITED STATES
- Edelblute, Thomas, UNITED STATES
- Edgar, William, UNITED STATES
- Eilts, John, UNITED STATES
- Ellis, Lisa, UNITED STATES
- Ely, Tamson, UNITED STATES
- English, Cynthia, UNITED STATES
- Epp, R.H., UNITED STATES
- Ercegovac, Zorana, UNITED STATES
- Erickson, Andrea, UNITED STATES
- Erickson, Carol, UNITED STATES
- Erickson, Jill, UNITED STATES
- Ertel, Monica, UNITED STATES
- Fajardo, Lieselotte H Werner, UNITED STATES
- Fang, Josephine, UNITED STATES
- Farah, Barbara, UNITED STATES
- Fark, Ronald, UNITED STATES
- Farkas, Andrew, UNITED STATES
- Farkas, Doina, UNITED STATES
- Farmer, Lesley, UNITED STATES
- Farrell, Michele, UNITED STATES
- Farrington, Jean, UNITED STATES
- Fasick, Adele, UNITED STATES
- Fatuyi, Esther, UNITED STATES
- Fedunok, Suzanne, UNITED STATES
- Fiedler, Lien-Huong, UNITED STATES
- Field, Judith, UNITED STATES
- Fietzer, William, UNITED STATES
- Fineman, Charles S., UNITED STATES
- Fingold, Sydney, UNITED STATES
- Finkelstein, Norman, UNITED STATES
- Fiore, Carole D, UNITED STATES
- Fitzgibbons, Shirley, UNITED STATES
- Flake, Donna, UNITED STATES
- Flanagan, Susan, UNITED STATES
- Flecker, Dale, UNITED STATES
- Flynn, Patricia, UNITED STATES
- Fogarty, Molly, UNITED STATES
- Ford, Barbara, UNITED STATES
- Ford, Rebecca Mitchell, UNITED STATES
- Forsman, Rick, UNITED STATES
- Foster, Stuart, UNITED STATES

- Fox, Susan, UNITED STATES
- Francoeur, Stephen, UNITED STATES
- Frankenfeld, Connie, UNITED STATES
- Freedman, Maurice, UNITED STATES
- Freiband, Susan, UNITED STATES
- Frey, Jo Ann, UNITED STATES
- Friedman, Catherine, UNITED STATES
- Frierson, Eleanor, UNITED STATES
- Fullerton, Vera, UNITED STATES
- Funk, Carla, UNITED STATES
- Funk, Mark, UNITED STATES
- Gall, Carole, UNITED STATES
- Gallagher, Patricia E., UNITED STATES
- Garner, Diane, UNITED STATES
- Garnett, Thomas, UNITED STATES
- Gaunt, Marianne, UNITED STATES
- Gause, Sharon, UNITED STATES
- Gehring, Donna, UNITED STATES
- Gelfand, Julia, UNITED STATES
- Georgas, Helen, UNITED STATES
- Ghikas, Mary, UNITED STATES
- Gibbs, Nancy, UNITED STATES
- Gilroy, Susan, UNITED STATES
- Gilton, Donna, UNITED STATES
- Girard, Kathryn, UNITED STATES
- Gitner, Fred J., UNITED STATES
- Glazerman, Barbara, UNITED STATES
- Glynn, Thomas, UNITED STATES
- Goeser, Gabriele, UNITED STATES
- Gogolin, Reiner, UNITED STATES
- Gold, Anne Marie, UNITED STATES
- Goldberg, Jolande, UNITED STATES
- Goldstein, Doris, UNITED STATES
- Gomez, Martin, UNITED STATES
- Gordon, William, UNITED STATES
- Gorman, Michael, UNITED STATES
- Gould, Martha, UNITED STATES
- Greene, Beverly, UNITED STATES
- Greenstein, Daniel, UNITED STATES
- Grefsheim, Suzanne, UNITED STATES
- Grier, Persko, UNITED STATES
- Grove, Shari, UNITED STATES
- Gruhl, Andrea, UNITED STATES

- Grundset, Eric G., UNITED STATES
- Grycz, Czeslaw, UNITED STATES
- Guarcello, Catherine, UNITED STATES
- Guerra, Delin, UNITED STATES
- Guglielmoni, Mirta, UNITED STATES
- Gulick, Susan, UNITED STATES
- Gwinn, Nancy, UNITED STATES
- Haas, Ruth, UNITED STATES
- Hagemeyer, Alice L., UNITED STATES
- Hahn, Bessie, UNITED STATES
- Halporn, Barbara, UNITED STATES
- Hanson, Beth, UNITED STATES
- Hanson, Elizabeth, UNITED STATES
- Hardesty, Larry, UNITED STATES
- Harris, Patricia, UNITED STATES
- Harrison, Lucy, UNITED STATES
- Hart, Edward, UNITED STATES
- Have, Elizabeth Ten, UNITED STATES
- Hayes, Allene, UNITED STATES
- Hayes, Donatus, UNITED STATES
- Hayes, Paula, UNITED STATES
- Hazelden, Joanna, UNITED STATES
- Hazen, Dan, UNITED STATES
- Heath, Fred, UNITED STATES
- Heinrich, Helen, UNITED STATES
- Herman, Elizabeth, UNITED STATES
- Heroux, Marlene, UNITED STATES
- Hewitt, Joe, UNITED STATES
- Hewitt, Patricia, UNITED STATES
- Hiebing, Dottie, UNITED STATES
- Hightower, Jack, UNITED STATES
- Hildula, Leslie, UNITED STATES
- Hinchliffe, Lisa, UNITED STATES
- Hirshon, Arnold, UNITED STATES
- Hogan, Sharon, UNITED STATES
- Holahan, Paulette, UNITED STATES
- Homan, J. Michael, UNITED STATES
- Hopper, Mary, UNITED STATES
- Hopper, Michael, UNITED STATES
- Horodecka, Oxana, UNITED STATES
- Horrell, Jeffrey, UNITED STATES
- Horton, Forest W., UNITED STATES
- Hostage, John, UNITED STATES

- Howe-Soper, Margaret, UNITED STATES
- Hudson, Alice C., UNITED STATES
- Huey, Talbott, UNITED STATES
- Hughes, Kathleen, UNITED STATES
- Hurley, Gail, UNITED STATES
- Hurst, Jill, UNITED STATES
- Hutchinson, Heidi, UNITED STATES
- Hyer, Mark, UNITED STATES
- Immroth, Barbara, UNITED STATES
- Irving, Ophelia M, UNITED STATES
- Jackson, Mary, UNITED STATES
- Jackson, Patience, UNITED STATES
- Jacobs, Alice, UNITED STATES
- Jambhekar, Neeta, UNITED STATES
- Jelks, Joyce, UNITED STATES
- Jenkins, Althea, UNITED STATES
- Jenkins, Carol, UNITED STATES
- Jerry, Sherman, UNITED STATES
- John, Nancy, UNITED STATES
- Johnson, Carol, UNITED STATES
- Johnson, Molly, UNITED STATES
- Jones, B, UNITED STATES
- Jones, Barbara, UNITED STATES
- Jones, Curley C., UNITED STATES
- Jones, Mary Elizabeth, UNITED STATES
- Jordan, Robert L. (Jay), UNITED STATES
- Jordan, Sophia, UNITED STATES
- Jul, Erik, UNITED STATES
- Junus, Sri Gadis Ranti, UNITED STATES
- Kader, Ab, UNITED STATES
- Kagan, Alfred, UNITED STATES
- Kain-Breese, April, UNITED STATES
- Kajosalo, Erja, UNITED STATES
- Kanabar, Dina, UNITED STATES
- Kao, Joyce, UNITED STATES
- Kardokas, Christine, UNITED STATES
- Karon, Bernard, UNITED STATES
- Kascus, Marie, UNITED STATES
- Kaufman, Paula, UNITED STATES
- Kautzman, Amy, UNITED STATES
- Kehoe, Scott, UNITED STATES
- Kellar, Lynn, UNITED STATES
- Kelsey, Ann, UNITED STATES

- Kemp, Barbara, UNITED STATES
- Kennedy, Helen Kay, UNITED STATES
- Kenney, Brian J., UNITED STATES
- Kent, Robert, UNITED STATES
- Kern, Danielle, UNITED STATES
- Kersten, Karen, UNITED STATES
- Kesselman, Martin, UNITED STATES
- Keyhani, Andrea, UNITED STATES
- Keys, Charlotte, UNITED STATES
- Kho, Lian, UNITED STATES
- Kibbee, Josephine, UNITED STATES
- Kienzle, Michael, UNITED STATES
- Kinna, Chryssoula, UNITED STATES
- Kinney, Angela, UNITED STATES
- Kintz, Robert, UNITED STATES
- Kirk, Tamra, UNITED STATES
- Kirven, Sheila, UNITED STATES
- Kissman, Paul, UNITED STATES
- Klaiber, Diane, UNITED STATES
- Klompus, Yelena, UNITED STATES
- Kniffel, Leonard, UNITED STATES
- Knowles, Em Claire, UNITED STATES
- Koehler, Wallace, UNITED STATES
- Kogi, Jane, UNITED STATES
- Kohl, David, UNITED STATES
- Kok, Victoria, UNITED STATES
- Koontz, Christine, UNITED STATES
- Kormann, Wells, UNITED STATES
- Kotoklo, Mireille-Paule, UNITED STATES
- Koveckiene, Eugenija, UNITED STATES
- Kranich, Nancy, UNITED STATES
- Kresge, Lynda, UNITED STATES
- Krueger, Carol, UNITED STATES
- Krug, Judith, UNITED STATES
- Kruger, Betsy, UNITED STATES
- Kuhl, Nancy, UNITED STATES
- Kurutz, Gary F., UNITED STATES
- La Tronica, Starr M., UNITED STATES
- Lacroix, Micheal, UNITED STATES
- Lambert, Lyn, UNITED STATES
- Lamont, Melissa, UNITED STATES
- Lance, Keith, UNITED STATES
- Larsen, Anne, UNITED STATES

- Larson, Carol, UNITED STATES
- Lauffer, Donna, UNITED STATES
- Lawrence, Deirdre, UNITED STATES
- Lawson, Dawn, UNITED STATES
- Laxar, Philip, UNITED STATES
- Leahy, Lynda, UNITED STATES
- Lee, Dong Choon, UNITED STATES
- Lee, Sul, UNITED STATES
- Lee, Susan, UNITED STATES
- Leeds, Pauline, UNITED STATES
- Lehmann, Vibeke, UNITED STATES
- Lementauskiene, Jolanta, UNITED STATES
- Lewis, John, UNITED STATES
- Li, Lisha, UNITED STATES
- Lieberman, Ronald, UNITED STATES
- Light, Jane, UNITED STATES
- Lindbloom, Mary-Carol, UNITED STATES
- Lindsey, Trudy, UNITED STATES
- Lipow, Anne, UNITED STATES
- Little, Rosemary Allen, UNITED STATES
- London, Nancy, UNITED STATES
- Long, Sarah, UNITED STATES
- Long, Suzanne de, UNITED STATES
- Lorkovic, Tatjana, UNITED STATES
- Loscalzo, Anita, UNITED STATES
- Lovett-Graff, Bennett, UNITED STATES
- Ludmer, Joyce, UNITED STATES
- Lukas, Dale, UNITED STATES
- Lutz, Marilyn, UNITED STATES
- Lynch, Beverly, UNITED STATES
- Lynch, Clifford, UNITED STATES
- Lynden, Frederick C., UNITED STATES
- Lynden, Irina L., UNITED STATES
- Lynes, Tezeta, UNITED STATES
- Lyon, Becky, UNITED STATES
- MacAndrew, Kathleen, UNITED STATES
- MacLennan, Birdie, UNITED STATES
- Maharam, Gladys, UNITED STATES
- Maier, Rob, UNITED STATES
- Malamud, Judith, UNITED STATES
- Malek-Wiley, Rebecca R., UNITED STATES
- Malinconico, Michael S., UNITED STATES
- Maloney, Yolanda, UNITED STATES

- Manning, Martin, UNITED STATES
- Mansfield, Jerry, UNITED STATES
- Mansfield, Judith A., UNITED STATES
- Marcum, Deanna, UNITED STATES
- Marcum, James, UNITED STATES
- Margaitis, Vida, UNITED STATES
- Margolis, Bernard A., UNITED STATES
- Margolis, Deborah J., UNITED STATES
- Markey, Raymond, UNITED STATES
- Marshall, Joanne, UNITED STATES
- Martin, Elaine, UNITED STATES
- Martin, Giles, UNITED STATES
- Martin, Robert, UNITED STATES
- Martin, Susan, UNITED STATES
- Masar, Mladen, UNITED STATES
- Mason, Marilyn, UNITED STATES
- Massis, Bruce, UNITED STATES
- Mastic, J. Scott, UNITED STATES
- Mates, Barbara, UNITED STATES
- Matusiewicz, Joy, UNITED STATES
- Mayer, Constance, UNITED STATES
- Mazzolini, Deborah, UNITED STATES
- McCallum, Sally, UNITED STATES
- McCann, Linda, UNITED STATES
- McCawley, Christina, UNITED STATES
- McClure, Lucretia, UNITED STATES
- McConwell, Jeanne, UNITED STATES
- McCool, Donna, UNITED STATES
- McCray, Jeanette, UNITED STATES
- McDonald, Christine, UNITED STATES
- McGarr, Sheila, UNITED STATES
- McGarry, Dorothy, UNITED STATES
- McGinty, James, UNITED STATES
- McGlamery, Patrick, UNITED STATES
- McGlinchey, Andrea, UNITED STATES
- McGrattan, Alana, UNITED STATES
- McGuire, Diane, UNITED STATES
- McMullen, Heather, UNITED STATES
- McNulty, Philip, UNITED STATES
- McPhail, Martha, UNITED STATES
- McQuillan, David C., UNITED STATES
- Mercer, Florence, UNITED STATES
- Messerle, Judith, UNITED STATES

- Metcalfe, Sara, UNITED STATES
- Metcalfe, Wayne J., UNITED STATES
- Meyer, Jerome, UNITED STATES
- Miller, David, UNITED STATES
- Miller, Kim, UNITED STATES
- Miller, Rush G., UNITED STATES
- Misner, Sophie, UNITED STATES
- Mitchell, Joan, UNITED STATES
- Mitchell, Sarah, UNITED STATES
- Mitts, Peggy, UNITED STATES
- Moeller, Mary, UNITED STATES
- Montgomery Smith, Ann, UNITED STATES
- Moore, Dahrl E., UNITED STATES
- Morris, Leslie R., UNITED STATES
- Morris, Steve, UNITED STATES
- Moyer, Vincent, UNITED STATES
- Muccino, Donald, UNITED STATES
- Muller, Karen, UNITED STATES
- Mullins, James, UNITED STATES
- Munoff, Gerald, UNITED STATES
- Murthy, Uma, UNITED STATES
- Myles, Carole, UNITED STATES
- Napoli, Donald, UNITED STATES
- Nauta, Tjalda, UNITED STATES
- Neal, James G., UNITED STATES
- Neal, Sandra, UNITED STATES
- Neely, Stephanie, UNITED STATES
- Neilson, Susan W., UNITED STATES
- Neri, Rita, UNITED STATES
- Newman, Wilda, UNITED STATES
- Nguyen, Lu, UNITED STATES
- Nisbet, Miriam, UNITED STATES
- Nudelman, Judith, UNITED STATES
- Nunn, Hillary, UNITED STATES
- Nutter, Susan, UNITED STATES
- Oakley, Robert, UNITED STATES
- Obrien, Nancy, UNITED STATES
- Okerson, Ann, UNITED STATES
- Okobi, Elsie, UNITED STATES
- Olson, Michael P., UNITED STATES
- Olszewski, Lawrence, UNITED STATES
- O'Neill-Johnson, Sue, UNITED STATES
- Ordian, Svetlana, UNITED STATES

- Osterbur, David, UNITED STATES
- Otterson, Bradley, UNITED STATES
- Ouderkirk, Jane, UNITED STATES
- Ouyang, George, UNITED STATES
- Owen, Terry, UNITED STATES
- Owsley, Betty, UNITED STATES
- Oyler, Patricia, UNITED STATES
- Pace, Andrew, UNITED STATES
- Panella, Nancy, UNITED STATES
- Paradise, Anne, UNITED STATES
- Parent, Roger H., UNITED STATES
- Parker, Sara, UNITED STATES
- Patel, Jashu, UNITED STATES
- Patterson, Grace, UNITED STATES
- Pattison, Laura, UNITED STATES
- Patton, Glenn, UNITED STATES
- Pellington, Mary Ellen, UNITED STATES
- Perlow, Ellen, UNITED STATES
- Perry, Barbara, UNITED STATES
- Pilch, Janice, UNITED STATES
- Pisani, Assunta, UNITED STATES
- Poland, Jean, UNITED STATES
- Porter, Jean, UNITED STATES
- Power, Valeria, UNITED STATES
- Prager, George A., UNITED STATES
- Preece, Barbara, UNITED STATES
- Prochaska, Alice, UNITED STATES
- Proett, Naomi, UNITED STATES
- Pronevitz, Gregory, UNITED STATES
- Putney, Patricia, UNITED STATES
- Quezada, Shelley, UNITED STATES
- Raboin, Regina Fisher, UNITED STATES
- Rainwater, Jean, UNITED STATES
- Ramos, Carla, UNITED STATES
- Ranney, Melora, UNITED STATES
- Raphael, Molly, UNITED STATES
- Rast, John, UNITED STATES
- Ratynski, Maureen, UNITED STATES
- Rauch, Ellen, UNITED STATES
- Rawnsley, Virgilia, UNITED STATES
- Ray, Joyce, UNITED STATES
- Reed, Alice, UNITED STATES
- Reed, Marcia, UNITED STATES

- Reichel, Mary, UNITED STATES
- Reid, Carolyn, UNITED STATES
- Reid, Judith, UNITED STATES
- Reis, Tovah, UNITED STATES
- Rencher, David E., UNITED STATES
- Reynolds, Thomas, UNITED STATES
- Rinaldo, Constance, UNITED STATES
- Roberts, Bobby, UNITED STATES
- Robinson, Carol, UNITED STATES
- Robinson, Linda, UNITED STATES
- Robinson, William, UNITED STATES
- Rockman, Ilene, UNITED STATES
- Rockwood, Irving, UNITED STATES
- Roderer, Nancy, UNITED STATES
- Rodger, Joey, UNITED STATES
- Rodrigues, Helena, UNITED STATES
- Rodriguez, Cesar, UNITED STATES
- Roe, Sandy, UNITED STATES
- Rogers, Michael, UNITED STATES
- Rold, Joseph da, UNITED STATES
- Roman, Susan, UNITED STATES
- Romano, Catherine, UNITED STATES
- Roosa, Mark, UNITED STATES
- Rosenblum, Brian, UNITED STATES
- Ross Embrey, Theresa, UNITED STATES
- Ross, Deidre Irwin, UNITED STATES
- Ross, Joseph, UNITED STATES
- Rowe, Cathy, UNITED STATES
- Ruelle, Barbara, UNITED STATES
- Runkle, Martin, UNITED STATES
- Ruschoff, Carlen, UNITED STATES
- Russell, Judith, UNITED STATES
- Ryan, Marianne, UNITED STATES
- Sabaratnam, Selvarani, UNITED STATES
- Saffer, Melinda, UNITED STATES
- Sager, Donald, UNITED STATES
- Salonen, Ethel, UNITED STATES
- Samoeil, Simon, UNITED STATES
- Sanabria, Antonio, UNITED STATES
- Scharf, Irene, UNITED STATES
- Schaubman, Debbi, UNITED STATES
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Activities & Services

Poster Presentations
IFLA 67th General Conference
Boston, USA
21-22 August 2001

12.00-14.00

1. The Science and Technology Information Network of the Philippines (ScINET-PHIL) Experience
   ROSIE R. ALMOCERA (Science and Technology Institute, Metro Manilla, Philippines)
2. Development of a Cooperative Resource Sharing Agreement in the Country of Lebanon
   LESLIE ALTER HAGE (Notre Dame University-Louaize, Zouk Mosbeh, Lebanon)
3. MINERVA: The Web Preservation Project of the Library of Congress
   CASSY AMMEN (Library of Congress, Washington, USA)
4. TEEAL (The Essential Electronic Agricultural Library): Making a Difference in the Developing World
   MARY ANDERSON OCHS (Albert R. Mann Library, Cornell University, Ithaca, USA)
5. ASTM Paper Aging Research Program
   R. BRUCE ARNOLD (R.B. Arnold Associates Inc, West Chester, USA)
6. Books for All: An International Project of IFLA and UNESCO Supporting Children's Libraries in Developing Countries
   LIOBA BETTEN (BOOKS FOR ALL, Munich, Germany)
7. New Models for Reference Service
   KAY ANN CASSELL (New York Public Library, NewYork, USA)
8. Learning Styles of International Students - Effective Tools for Bibliographic Instruction
   CALMER CHATTOO (University at Buffalo Law Library, Buffalo, USA)br
9. International and Comparative Information Services: Issues and Trends Relevant to the Development of a Global Information Society
   MARIA T. CHAVEZ-HERNANDEZ (Florida State University Tallahassee, USA)
10. Find-It! Illinois: Ramp-up to Find-It! America
    ANNE CRAIG (Illinois State Library, Springfield, USA)
11. Distance Education: How Librarians and Library School Education Position Themselves?
    ARIF DAGLI (Tallahassee, USA)
12. The Campaign for America's Libraries@your library
    DEBORAH DAVIS and PATRICIA GLASS SCHUMAN (American Library Association, Chicago, USA)

13. Hand in Hand
    BETSY DIAMANT-COHEN (Enoch Pratt Free Library at Port Discovery, Baltimore, USA),
    CAROL SANDLER (Strong Museum, Rochester, USA) and
    DINA SHERMAN (Brooklyn Children's Museum, Brooklyn, USA)
14. Le développement de l'Afrique par la Promotion de l'Information Technologique: le Centre Régional Africain de Technologie
    BALLA DIOP (Centre Régional Africain de Technology (CRAT), Dakar, Sénégal)
15. Collections Conservation Decision Making is Key
    JEANNE DREWES (Michigan State University Libraries, East Lansing, USA)
16. Information Literacy Education: the Case Study of Escola Politecnica da Universidade de Sao Paulo - Brazil
    ELISABETH A. DUDZIAK, MARIA A. GABRIEL and MARIA CHRISTINA O. VILLELA (Escola Politecnica da USP, Sao Paulo, Brazil)
17. Toy Libraries Contribute to Child Development and Early Learning
    MARIE FAULKNER (Northwood, U.K.)
18. How did you find that?!: The Odyssey of NOAH's Online Genetics Information for Patients
    PATRICIA E. GALLAGHER (New York Academy of Medicine, New York, USA)
19. La Instrucción Bibliográfica para los Estudiantes de Nuevo Ingreso: Como ensenar la Biblioteca a los nuevos Estudiantes y que estos aprendan mientras juegan dentro de la misma
    LUIS MARIO GALLAND ORTIZ (Universidad de las Americas-Puebla, Puebla, Mexico)
20. El Impacto de la Biblioteca Electrónica en el Comportamiento del Investigador y en la Actuación del Profesional de la Información: La Experiencia de la Biblioteca Universitaria Brasilena
    VALERIA dos S. GOUVEIA MARTINS, MARIA ALICE REBELLO DO NASCIMENTO and MONTSERRAT URPI CAMARA (UNICAMP, Sao Paulo, Brazil)
21. Grey Literature in the Health Science Area at the Federal University of Maranhao (UFMA): Research Project
    MARIA DO ROSÁRIO GUIMARAES ALMEIDA (Universidade Federal do Maranhao, Brazil)
22. Electronic Collection Development via NetLibrary
    SUZANNE D. GYESZLY (Policy Sciences & Economics Library Texas. USA)
23. Licensing Information for Librarians in Central and Eastern Europe - CELIP Project
    TUULA HAAVISTO (Central and Eastern European Licensing Information Platform, Helsinki, Finland)
24. NORDINFO: Nordic Council for Scientific Information 25th Anniversary
    SIGRUN KLARA HANNESDOTTIR (NORDINFO, Helsinki, Finland)
25. International Friends of the Alexandria Library
    ALAN HOPKINSON (Middlesex University, London, U.K.)
26. Towards the Construction of Benchmarks for Information Literacy: an Evaluation of Inform. Competence among Graduate Students at the University of Cape Town
    KARIN JAGER and MARY NASSIMBENI (University of Cape Town, Rondebosch, South Africa)
27. RGU.COM - Developing a Virtual Campus for LIS Education from Print Based Distance Learning to Knowledge Management on the Internet
    IAN M. JOHNSON (The Robert Gordon University, Aberdeen, U.K.)
28. Providing Web Technology Basics to Patrons
    DINA KANABAR (Westford, USA)

29. Bridging the Gap: Experience of the IGNOU in Providing Library Services to the Distance Learners
    UMA KANJILAL and NEELA JAGANNATHAN (Indira Gandhi National Open University, New Delhi, India)
30. An Internet-Based Library Questionnaire Survey: Pros and Cons
    VICTORIA T. KOK, C. EDMONDS and ELEANOR G. GARRISON (Virginia Polytechnic Institute and State University Blacksburg, USA)
31. Virtual Libraries in the New Millenium: an African Prespective
    RANDY EMMANUEL KOMMEY (Volta River Authority, Accra, Ghana)
32. To be announced
    SVETLANA KURMASHEVA (National Library of Kyrgyzstan, Kyrgyzstan, Russian Federation)
33. Principles of Sustainable Design Applied to Library Buildings
    ALEXANDER P. LAMIS (Robert A.M. Stern Architects, New York, USA
34. Strategic and Systematical Development of Competencies and Negotiating Vages/salaries among Danish Librarians
    JESPER LAURSEN (Danish Union of Librarians, Frederiksberg, Denmark)
35. Creation of Electronic Document and Information Supply Association in Russia
    OLGA L. LAVRIK (State Public Library of Scientific and Technical Literature of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russian Federation) and
    VICTOR A. GLOUKHOV (Institute on Scientific Information for Social Sciences of the Russian Academy of Sciences, Moscow, Russian Federation)
36. MALIBU: Managing the Hybrid Library for the Benefit of Users - Integration, Integration, Integration!
    ANN LEES (The Library King's College, London, UK)
37. Ready for Reference. Online! Anytime!@your library TM
    MARY-CAROL LINDBLOOM (Alliance Library System, Quincy, USA)
38. The Center for Research Libraries: Building International Collections through Cooperation
    BEVERLY P. LYNCH (Center for Research Libraries, Chicago, USA)
39. The Teaching Levels of Reference Service: A Statistical Representation
    PULINE MANAKA and ROUMIANA KATZARKOV (University of California, Irvine, USA)
40. Pacticipative Management and Technological Resources in University Libraries
    RAIMUNDA RAMOS MARINHO (UFMA, Sao Luiz, Brazil)
41. Bridging Library Communities: a Project from Swiss Libraries/Un Lien entre les Bibliothèques du Monde Entier
    DANIELLE MINCIO ((Bibliothèque cantonale et universitaire, Lausanne, Switzerland) and DAISY McADAM (Bibliothèque de Faculté des sciences économiques et sociales, Genève, Switzerland)
42. Teaching and Learning Cultural Competency in Medical School: Medical Faculty - Librarian Collaboration
    OBIANUJU MOLLEL (Whitney Medical Library, New Haven USA)
43. Early English Books Online and the EEBO Text Creation Partnership: Creating Searchable Digital Versions of Early English Books
    HILLARY NUNN (University of Michigan, Ann Arbor, USA)
44. When Old Things become new Again: Strategies for Change in Libraries and Archives
    H. INCI ÖNAL (Hacettepe University, Ankara, Turkey)
45. The Virtual Library as the Finest Tool for the ILL Services: Ten Years Work to Improve the End-

user Satisfaction in a Small Country
MARIE THÉRÈSE PAQUES-LEDENT (Université de Liège, Liège, Belgium)

46. The Renardus Project and the Australian Subject Gateways Forum: Collaboration between Subject Gateways in Europe and Australia
MARIANNE PEEREBOOM (Royal Library, The Hague, Netherlands)

47. The Bibliographical Citation in Dissertation of Master Degree in PUC CAMP, the year of 1995 and 1999, Exploratory Study in the Area of Librarianship and Information Science
MARIA FÁTIMA PEREIRA (Sao Paulo, Brazil)

48. Celebrating a New Century that Celebrates Diversity: Positive Language as the Key to Making a Positive Difference in the Knowledge Age
ELLEN PERLOW (Texas Woman's University, Denton, USA)

49. RECIARIA: Argentine Information Networks
GRACIELA PERRONE (Reciaria-Biblioteca Nacional de Maestros, Buenos Aires, Argentina)

50. Regional Alliance for Preservation (RAP): A Model Cooperative Network
VIGILIA RAWNSLEY (Conservation Center for Art and Historic Artifacts, Philadelphia, USA)

51. Desarrollo de un Sistema de Información Hipermedial para el Acceso a Legislación
JESÚS ROBLEDANO ARILLO (Universidad Carlos III de Madrid, Madrid, Spain)

52. CLS Online: Come Join the Fun!
THERESA A. ROSS EMBREY (Chicago Library System, Chicago, USA)

53. Aging and Verbal Creativity
ODD SAETRE (Flaktveit, Norway)

54. Metadatos para Imágenes en Internet
SAMIRA SAMBAINO (Montevideo, Uruguay)

55. Advancement of Librarianship Programme
BIRGITTA SANDELL (ALP Office, Uppsala, Sweden)

56. ALA's Sister Library Program - Promoting a Global Community of Libraries in this Knowledge Age
MARY A. SHERMAN (Pioneer Library System, Norman, USA)

57. Developing Intellectual Property Policy for Digital Library (from the reference librarian's perspective)
TANYA SHKOLNIKOV (HSC Library, Suny at Stony Brook, USA)

58. Por que lo hacemos asi?
ANN MONTGOMERY SMITH (University of Massachusetts-Dartmouth, North Dartmouth, USA)

59. Multimedia Database of Engineering Documents
ATUL Kumar SRIVASTAVA and Pankaj Srivastava (Technical Business Group Library Oil and Natural Gas Corporation, Mumbai, India)

60. Providing Consumer Health Information to Asian Americans - A Collaborative Model
MARSHA SULLIVAN and DEBORAH HALSTED (Houston Academy of Medicine, Houston, USA)

61. Serving Multi-Type Librarians in the World's the most Devise City - Metropolitan New York Library Council's Practice
XUEMAO WANG and DOTTIE HIEBING (METRO, New York, USA)

62. Inform the World Volunteers: Advocates for Sustainable Rural Library Development
LAURA WENDELL (World Library Partnership, Bahama, USA)

63. Translated Children's Books from other Languages into English: A Study of Outstanding Books in

the USA, 1990 - 2000
MAUREEN WHITE and NANCY BLUEMEL (University of Houston-Clear Lake, Abilene, USA)

64. Library of the Future in a Web-based Internet Environment
YANG ZHIPING and ARTHUR W. HAFNER (Chengdu Library of the Chinese Academy of Sciences, Chengdu, China Seton Hall University, South Orange, USA)
65. The Pilot of the Latvian Cultural School under the EC Leonardo da Vinci Programme "Public Library Management and new Information Technologies"
AUSMA ZOLDNERE (Latvijas Kulturas Skola, Riga, Latvija)
66. Slovenian National Library has finished its Retrospective Conversion
MAJA ZUMER (National and University Library, Ljubljana, Slovenia)

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67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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Rio de Janeiro

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Fundacao Memorial de America Latina
Sao Paulo

Sueli Yano
Pontificia Universidade Catolica de Campinas
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BULGARIA

Miroslava Ivanova
Sofia University
Sofia

CAMBODIA

Pouev Nop
Japan International Volunteer Centre (JVC)
Phnom Penh

CHILE

Ernesto Reynaldo Lopez Arcos
St. Paul's School Library
Vina Del Mar

Sandra Cecilia Rogel Barria
Biblioteca Publica No. 47 'GOB. Oscar Viel'
Punta Arenas

CHINA

Jia Liu
Dept. of Information Management, Peking University
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Luis Bernardo Yepes Osorio
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San Francisco

Aylin Valdivia Azze
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Rijeka

CUBA

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La Habana

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Museo Nacional de Bellas Artes
La Habana

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La Habana

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Quito

Monica Edith Sabay Recalde
Consejo Nacional de las Mujeres
Quito

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Marco Tulio Castillo Lopez
Fundacion Salvadorena para la Salud y el Desarrollo Humano
Antiguo Cuscatlan

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Proyecto Movilizador de Apoyo a la Educacion Maya PROMEM
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Franck-Gilles Dorsainvil
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INDIA

Dinesh K. Gupta
Kota Open Univ.
Kota

INDONESIA

Wahjoe Dwiprijono
Muhammadiyah U. of Malang
Malang

IRAN

Hansan Siamian
Mazandaran Medical Sciences Univ.
Sari

JAMAICA

Cheryl Cousins
Clarendon Parish Library
May Pen, Clarendon

Winsome Edwards
National Library of Jamaica
Kingston

KAZAKHSTAN

Olga Kvochkina
Republic Scientific and Technical Library of Kazakhstan
Almaty

KENYA

Duncan Omole
African Council for Communication Education
Nairobi

KYRGYZTAN

Julia Gridchina
Tula Region Universal Scientific Library
Tula

LEBANON

Imad Bachir
Lebanese Univ.
Beirut

MALAYSIA

Joyce Tuining
Sabah State Library
Kota Kinabalu

MEXICO

Gerardo Ascencio Baca
Inst. Tecnologico y de Estudios Superiores de Monterrey
Chihuahua

Jose Juan Caballero
Centro Internacional de Mjoramiento de Maiz y Trigo, CIMMYT
Texcoco

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Inst. Vanguardia de Hermosillo, A.C.
Hermosillo

Martina Patricia Flores Saucedo
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Durango

Dora Alicia Flores Rocha
ITESM Campus Garza Sada y UANL
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Mexico City

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Distrito Federal

Rosa Maria Rodriguez Perez
Univ. de Monterrey
San Pedro Garza Garcia

Lorena Isabel Torres Rivera
Centro Mexicano para la Filantropia, A.C.
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Universidad Autonoma de Sinaloa
Culiacan

Maria Magdalena Vazquez Sanchez
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Ricardo Villegas Tovar
Biblioteca Univ. de las Americas
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Biblioteca Publica de David
David

Guadalupe del Carmen Garcia de Rivera
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Honorable Camara de Senadores
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Gloria Beatriz Peralta
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Ateneo Professional Schools Library
Makati City

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Elena Ivanova
Sofia University Library
Sofia

SAINT LUCIA

Arlene Baptiste
Ministry of Commerce
Castries

SENEGAL

Moustapha Diallo
Africa Consultants International-ACI
Dakar

SLOVAK REPUBLIC

Milena Tetrenova
University Library-Technical University Kosice
Kosice

SOUTH AFRICA

Nompumelelo 'Mpumie' Damane

Mangaung Local Municipality
Bloemfontein

Farahnaaz Safodien
Women and Human Rights Documentation Centre
Bellville

Angela Spencer
Durban Metro Libraries
Durban

SOUTH KOREA

Mihwa Lee
Hansung University
Sungbukgu

SRI LANKA

Kalaivani Thirunavukarasu
University of Jaffna
Jaffna

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Punnapa Jintasirikul
Sasin Graduate Institute of Business Administration
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Nesrin Buyukcolak
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VENEZUELA

Tania Elena Diaz Borges
La Universidad del Zulia
Maracaibo

ZIMBABWE

Cecilia Mhiti
Southern Africa AIDS Information Disemination Service
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Oshakati

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International Federation of Library Associations and Institutions
www.ifla.org

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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CONFERENCE INFORMATION

Time and Place

The 67th IFLA Council and General Conference will take place at the Hynes Convention Center in Boston from August 16-25, 2001.

IFLA 2001 Website

For updated information on the conference please visit the IFLA 2001 website at
http://www.ifla.org/IV/ifla67/

Conference Venue

The Hynes Convention Center is the premier meeting space in New England. Located in the heart of Boston's beautiful and historic Back Bay, this high-tech, state-of-the-art facility is just few blocks from conference hotels, and just steps away from restaurants, shops, and local attractions. The Hynes is fully handicap accessible.

Simultaneous Interpretation

Simultaneous interpretation services will be available in five languages: English, French, German, Russian and Spanish. This service will be available for the opening and closing sessions and other selected sessions. Please look for the SI mark in the Final Program.

Availability of Papers

[ESPAÑOL] [FRANÇAIS]

During the Conference more than 150 papers and reports will be presented. Papers reaching IFLA before June 2001 will be printed in their original language versions in 9 Booklets, one for each division, and one booklet that will contain the Presidential address and other papers. If you want to receive all booklets please chick the appropriate box on the registration form. Booklet 0 will be in the conference bag.

As conference papers are received, they are posted to IFLANET, IFLA's official Web site at www.ifla.org continuously before the conference. Papers received before July 1, 2001 will be available as CD-ROM, produced by SilverPlatter Limited, one of IFLA's Corporate Partners, in cooperation with UDT office. The CD-ROM will be provided to all conference participants in the conference bags.

IFLA Express 2001

IFLA Express is a daily newsletter in English, which will be published during the Conference by the National Organizing Committee in collaboration with the IFLA Secretariat to give delegates information of general interest, and information from IFLA Secretariat, Divisions and Sections, and from the National Organizers. In addition two pre-conference issues of IFLA Express will appear in January and May/June 2001 with the latest news on the conference.

Disclaimer

The program is correct at the time of printing, however the Organizers reserve the right to alter the program if and as is deemed necessary.

Professional Conference Organizer

Congrex Holland BV has been appointed Official Conference Organizer for this event. Congrex works internationally with subsidiaries in the Netherlands, Sweden, Switzerland, Singapore and Malaysia, as well as licensed partners throughout Europe and Latin America.

Latest Revision: *October 18, 2000*

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TRAVEL INFORMATION

Preferred Airline

U.S./Canada originating passengers
Northwest will get you there for less! As your official airline, we are privileged to offer a special discount in the form of our Association Dollars Off Certificates (ADOCS). Based on the roundtrip airfare paid, all attendees will receive discounts ranging from USD 30 to USD 100. This certificate entitles five (5) passengers to a discount off a qualifying published Coach or First Class fare to Boston from the United States or Canada. Attendees using this program can save an additional 10% off the lowest applicable fare available at time of booking. A special code delivers fast and efficient service. And we guarantee that you will receive the lowest fare applicable the time of ticketing.

To receive your discount, call Northwest World Meeting and Incentive Reservations at 1-800-328-2111 Monday through Friday between 7.30 AM and 7.30 PM Central Time or have your professional travel company contact us. Save with your customized discount by mentioning your special code: Worldfile-NY010.

Instruct your travel agent to pay careful attention to placement of the Worldfile number in the ticket designator box after the fare basis code. Enter the fare basis code, then a (/) followed by the ticket designator (NW WORLDFILE) listed above. Also, advise the Agent to use your Worldfile number regardless of the fare purchased.

You can reserve your ticket on the Northwest/KLM website. Once in the Northwest booking engine, http://www.nwa.com/travel/reser/, you simply follow the "on-screen instructions to book a flight". When prompted, "Do

participation grant for developing countries

[ESPAÑOL]
[FRANÇAIS]

you have an electronic Certificate?", you will have to enter the WorldFile number found on the Association Dollars Off Certificate, in the reference code box. In addition to this direct link to Northwest's booking engine, you can use a variety of internet-based services, including; current arrival and departure information, information on members' WorldPerks accounts, flight availability, the ability to view and itinerary from the time reservations are made until 24 hours after the trip is completed. If no certificate was enclosed with this package please send an e-mail to the conference secretariat ifla2001@congrex.nl and mention ADOC, your name, address etc.

Europe/Asia originating passengers
Northwest will get you there for less! As your official airline, we are privileged to offer a special discount for international attendees as follows. For this program, we will offer a 10% discount off any applicable World Business Class, Normal Economy, Special Economy, APEX, Super APEX or any other excursion fare published to Boston. This discount is valid for travel on NORTHWEST/KLM designated flights from Europe or Asia. A special code delivers fast and efficient service. And we guarantee that you will receive the lowest fare applicable at the time of ticketing.

Travelers outside of North America should call the local Northwest or KLM office in their country of origin for reservations and fare information. All callers must refer to the Worldfile number listed below. Save with your customized discount by mentioning your special code: Worldfile-RBABN.

Instruct your travel agent to pay careful attention to placement of the Worldfile number in the ticket designator box after the fare basis code. Enter the fare basis code, then a (/) followed by the ticket designator (NW WORLDFILE) listed above. Also, advise the Agent to use your Worldfile number regardless of the fare purchased.

Passports

A valid passport is required for entry into the United States. A visa is required for citizens of a number of countries. Please check with the U.S. Embassy or U. S. Consulate for requirements.

An official letter of invitation to facilitate your visa application for entry to the United States will be sent by the U.S. Organizing Committee only after full receipt of conference registration payment. The letter of invitation is not a commitment on the part of the conference organizers to provide any financial support.

Climate

Being on the ocean means that Boston's climate is temperate in the summer. Temperatures in Boston in August range from 20 to 25 Centigrade (71-79 Fahrenheit). The skies in August are usually sunny and clear, but occasional rainy days are possible.

Transportation

Boston's Logan International Airport, located on Boston Harbor, is situated only minutes from downtown, where the conference will be held. Fourteen international carriers fly directly into Boston, and there are convenient flights from New York every hour. Boston has an extensive and affordable bus, subway, and tram system.

To travel from Logan Airport to conference hotels, there are many forms of transportation available, including public transportation, private and hotel shuttles, and taxis. To travel via public transportation, take the Logan shuttle which travels between all airline terminals and the "Blue Line" subway station, seven days a week, from 04.00 to 01.00 Information about the various transportation options can be viewed at: http://www.massport.com/logal/getti.html.

Public transportation is available through the Massachusetts Bay Transportation Authority's network of subways, buses and commuter trains. Information about routes and schedules can be obtained by calling +1 617-222-3200 or on the following website: http://www.mbta.org. A "Boston Visitors Pass" can be purchased for one, three or seven days, through the website, or call +1 617-222-5568 for further information.

Banking and Credit Cards

Bank hours are not standard, but banks in Boston are generally open Monday through Friday, from 9.00 or 10.00 to 17.00 to 18.00. A number of banks are open on Saturday mornings. Currency exchange services are available at larger banks.
Many hotels also provide currency exchanges to their hotel guests. Credit cards are widely accepted at all major hotels and most restaurant and shops.

Post Office

The closest post office to the Hynes Convention Center is one block away at the Prudential Center.

The hours are Monday through Friday, 8.00 to 18.00, and Saturday, 8.00 to 14.00.

Shopping

There is a wide variety of shopping near the Hynes Convention Center. Store hours vary according to size of store and location. The shops closest to the convention center are the "Shops at the Prudential Center" and "Copley Place". Shops at both centers are open Monday through Saturday, from 10.00 to 20.00. On Sunday, the Prudential shops are open from 11.00 to 18.00, the shops at Copley, 12.00 to 18.00

There are also many boutiques and shops on nearby Newbury Street. These stores usually open weekdays at 10.00 or 11.00 and have varying weekend and evening hours.

Electricity

The United States runs on 110 volts alternating current (a/c)

2001 Conference participation grant for developing countries

The 2001 IFLA Organizing Committee will support the participation of a number of delegates from developing countries. The grant will also acquaint recipients with U.S. Libraries and their services. The grant will cover travel, accommodation, a per diem food allowance and the conference fees. Priority will be give to younger professionals with minimum 5 years of experience in the field of libraries. The application form can be found on the IFLA 2001 website at http://www.ifla.org/IV/ifla67/fellowship.htm or can be requested at the conference secretariat, Congrex Holland BV. The application form and curriculum vitae (information about age, education/professional degrees and career) should be sent as soon as possible and no later than March 1, 2001 to:

IFLA 2001 Fellowship Program
50 E. Huron St.
Chicago, IL 60611
USA

Fax: +1 312 280 3256
E-mail: intl@ala.org

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PROGRAMS AT IFLA 2001

General programming for the Conference is done by the various IFLA Divisions, Sections, Roundtables, Discussion Groups, and the IFLA Professional Board. The U.S. National Organizing Committee (NOC) is responsible for the plenary speaker, opening session speakers, and all social and cultural events. The NOC also assists IFLA in finding speakers from the United States for programs.

If you are interested in participating in a program, please contact Evelyn Daniel, Chair of the Program Committee, or other members of the Program Committee. Further information on program participation may be found on the IFLA site in the IFLA Officers Handbook under Programmatic Concerns. A short summary appears below.

Background

IFLA programs are controlled by a Professional Board made up of chairs of each of the eight divisions. The eight divisions (plus five core programmes) control the program planning activities for all the sections. Sections belong to divisions. Round tables belong to sections, and the sections control the round table program planning activities.

Who Can Present Programs

Round tables and sections may request program time and space at IFLA meetings. There are specific forms and times when these must be presented. A calendar and program planning forms are sent to all the officers to use in submitted proposed programs. IFLA headquarters has a number of brochures or guidelines dealing with programming that are issued by the Professional Board. Current copies of these materials are available to chairs

Time Frame

Calls for Papers

Further Information

[ESPAÑOL]
[FRANÇAIS]

of Division Coordinating Boards, Sections, and Round Tables from Carol Henry, the Executive Officer of IFLA, at carol.henry@ifla.org.

Current Contacts

A list of current chairs and other officers of the units who control programming at IFLA with current email addresses is available at http://ils.unc.edu/daniel/IFLA/IFLA-contacts.html.

Program Formats

Program formats for IFLA have been standardized. Five kinds of professional meetings may be organized by divisions, sections, and round tables. These are:

- Open Forums
- Workshops
- Poster Sessions
- Discussion Groups
- Satellite Meetings

Programs may be sponsored by one or more IFLA groups. The IFLA Core Programmes may also be a co-sponsor of a meeting.

Open Forums

Forum slots usually occur on Monday, Tuesday or Wednesday of the conference week. For these fora, speakers are invited by a section to prepare a paper in advance and deliver it to an audience. Papers are provided in all five official languages of IFLA (each section has the responsibility of getting papers translated); for some sessions simultaneous translation is available. In any event speakers must speak slowly and enunciate clearly for those whose first language is not that of the speaker.

An open forum is typically topical in nature and relates to the theme of the conference with the special emphasis that a section seeks to give it. The time slot for a forum is typically two hours with 3-4 papers or a panel discussion. Session planners draw on the suggestions of the sponsoring group for speakers. Rarely is financial assistance offered to session speakers.

Workshops

Workshops are typically scheduled on Thursdays during the conference week and may be either one day or a half day in duration. Workshops are generally limited to 50 participants and often presented off-site. The purpose of a workshop is for exchange of ideas and thus the emphasis is on short speeches or panel presentations and a lot of dialogue.

Poster Sessions

Typically around 20 posters (but possibly as many as 40 in Boston) are displayed in an area where a lot of traffic is expected. Poster programs are presented twice in two hour intervals typically on Tuesdays and Wednesdays of the conference week from 12 to 2. Poster sessions combine content and appearance. A presenter for a poster session should be informal perhaps with handouts tightly coupled to graphical elements in the poster display itself.

Discussion Groups

These are groups coalescing around a particular topic and established on a two-year renewal basis. These are very informal with no designated speakers or published programs.

Satellite Meetings

Satellite meetings are pre- or post-conferences that need a longer time than one day. They typically last two to five days and allow expanded coverage of a particular theme or a training course. They are held either directly before or immediately after the IFLA Conference either in the same city or in another city in the same or a neighboring country. They may be listed in the Conference Program. All expenses must be met by the organizers, although sponsors may be sought and fees may be charged. Efforts should be made to have papers translated into the IFLA languages.

From Professional Board Guidelines: "Satellite meetings are the full responsibility of the sponsoring Division(s), Section(s), Round Table(s) or Core Programme(s) to organize and finance. All proposals for pre- and post-conference satellite meetings must be submitted to and approved by the Professional Board at least one year in advance."

Time Frame

An IFLA program unit must submit its first program 'intention' form sometime in the fall -- perhaps early October. A second more final form has to be submitted in early spring. The written papers are due in **May**. Translations are due shortly thereafter into the five official languages are English, French, Spanish, German and Russian. Translations are the responsibility of the program unit.

Calls for Papers

The IFLA program units will be announcing their calls for papers sometime in the fall of 2000 for acceptance and presentation at the IFLA 2001 conference. The calls will be made available on the conference site - first at the working site (http://ils.unc.edu/daniel/IFLA/IFLA-Contacts.html) listed above.

Further Information

For further information, please contact an officer of an appropriate section, a member of the Program Planning Task Force (http://IFLA.org/IV/ifla67/taskforc.htm) or to the chair, Evelyn Daniel (daniel@ils.unc.edu) .

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REGISTRATION AND HOTEL RESERVATION

You can register for the Conference and make a hotel reservation by filling out the enclosed registration/accommodation form. This form is to register one participant only and his or her accompanying person(s).

General information

Please note that the registration form and all other printed matter will be made available in English and Spanish.

- On-Line Registration Form:
  http://www.congrex.nl/ifla
- Printed Registration Form:
  [Adobe Acrobat PDF: Page 1 (186KB), Page 2 (13KB)]

In order to receive an official letter of invitation the payment of the registration fee must be received by CONGREX HOLLAND BV.

How to become a delegate

Registrations and hotel reservations can be done:

- By sending the form by fax or mail to CONGREX HOLLAND BV
- Via the IFLA 2001 website: http://www.ifla.org/IV/ifla67/

Registration fees

IFLA Member before May 15, 2001	USD 300
Non-IFLA Member before May 15, 2001	USD 350
IFLA Member after May 15, 2001	USD 375
Non-IFLA Member after May 15, 2001	USD 425

Cancellations and Refunds

General Hotel Information

Payment of Registration and Hotel Guarantee

[ESPAÑOL]
[FRANÇAIS]

Accompanying person before May 15, 2001	USD 200
Accompanying person after May 15, 2001	USD 275
One-day registration, on-site	USD 150

All IFLA members, regardless of category, will be entitled to register at the member rates published. If you are not an IFLA Personal or Institutional Member, but are a member of your National Library Association in Membership of IFLA, please contact your National Association or IFLA Headquarters for the correct membership number which should be completed on the registration form.

If your registration form and payment are received after May 15, 2001, automatically the late fee will be charged.

The registration fee covers

For delegates
Name badge * Admission to all sessions * All available conference papers * Admission to the exhibition * Opening and Closing Sessions * All receptions * Professional visits to Libraries

Accompanying persons
Name badge * Admission to Exhibition * One Sightseeing Tour * Opening Session * All receptions * Professional visits to Libraries *

Confirmation

If your faxnumber is indicated clearly and correctly on the form, the first page will be faxed to you within 24 hours as a confirmation of receipt. Congrex Holland BV will send out confirmation of your registration within six weeks after receipt of your payment. If you have not received a confirmation letter six weeks after receipt of your payment, please contact Congrex Holland BV. A final confirmation will be sent to you four weeks prior to the conference. This final confirmation letter must be presented upon arrival at the pre-registration desk (the 'PAID' desk) if the account has been settled or at the unsettled account-desk (the 'NON-PAID' desk) if a balance is still due.

Alterations

Alterations to your registration will not be accepted over the telephone. Please fax, post or e-mail any amendments to the Conference Secretariat.

Registration deadline

After **August 1, 2001**, pre-registration will close and all new registrations can only be done at the New Registration desk at the Hynes Convention Center during the conference.

The Visa Waiver Program

The Visa Waiver Program (VWP) enables citizens of participating countries to travel to the U.S. for tourism or business for 90 days or less without obtaining a U.S. visa. The VWP is administered by the Attorney General in consultation with the Secretary of State. The Visa Waiver Program (VWP) was created by an act of Congress as a pilot program in 1986 and implemented in 1988. Congress passed legislation to make the program permanent in October 2000, and the President signed the legislation on October 30, 2000.

Currently there are 29 participating countries in the VWP: Andorra, Argentina, Austria, Australia, Belgium, Brunei, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Monaco, The Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and Uruguay.

For more information on visa applications, visit the U.S. State Department's website: http://travel.state.gov/visa_services.html

Cancellations and Refunds

Notification of cancellation and refund requests must be submitted before June 1, 2001 in writing to the Conference Secretariat, Congrex Holland BV. The fee for cancellations received before **June 1, 2001** is USD 50. For cancellations after **June 1, 2001** no refunds will be given.

General Hotel Information

Reservations can be made for the major hotels. On the hotel booking form you are requested to indicate the hotel of your first and second choice. The Conference Secretariat reserves the right to book another hotel for you, should the desired accommodation be fully booked.

Room Reservations

Your reservation will be handled as soon as the hotel booking form [Adobe Acrobat PDF: Page 1 (185KB), Page 2 (11KB)] together with the guarantee is received by the Conference Secretariat. Participants are advised to reserve hotel rooms well in advance, as rooms cannot be guaranteed after **May 15, 2001**. All reservations will be handled on a first come, first served basis, after **May 15, 2001**, upon availability.
After **July 15, 2001**, you can contact the hotel directly to reserve a room.

Hotel Guarantee

In order to make a reservation, a guarantee by credit card is needed. In case you are not able to give a credit card guarantee, you have to pay a hotel deposit of USD 200 in advance to the Conference Secretariat, unless you have made your reservation after **July 15**, directly with the hotel.

Cancellation and refunds

If notification of cancellation is received in writing by the Conference Secretariat before **May 15, 2001** we will charge your credit card for USD 50 administration fee. If you have to cancel after the deadline we have to charge your credit card for USD 200 if the hotel cannot re-allocate your room. Please do not contact the hotel directly as all reservations are handled by the Conference Secretariat.

Confirmation
Within six weeks after receipt of your hotel guarantee, you will receive a confirmation of your hotel reservation including name, address of your hotel and costs per night. If you have paid a hotel deposit in advance to the conference secretariat this will be deducted from the bill upon check out by presenting the hotel voucher.

Hotel Voucher Your hotel voucher will be handed over to you upon registration at the Conference. You do not need your hotel voucher to check in at your hotel. Your hotel reservation is confirmed on your registration confirmation letter.

Hotel Categories and Prices
For the location of hotels please refer to the Map of Boston [Adobe Acrobat PDF: 191 KB].

Hotel	Single*	Double*	Triple*
Midtown	155	155	165
Sheraton**	166	178	198
Marriott***	167	195	215
Hilton	170	170	190
The Colonnade	185	205	230
Westin****	172	172	350
Copley Plaza	197	197	Not possible
Omni Parkerhouse	200	200	Not possible

* All room rates are per room, per night, excluding City Tax (12.45%). Please note that all hotels are within walking distance of the Hynes Convention Center and have a swimming pool.
Time frame for preferred rates August 13 - 29, 2001.
It is possible to book triple rooms in each hotel, please contact the hotel reservation department of Congrex Holland BV.
** Official Headquarters Hotel
*** US-Delegation Headquarters Hotel
**** Exhibitors Headquarters Hotel

Payment of Registration and Hotel Guarantee

Payment can only be made in US Dollars should be made in advance by:

1. Bank Draft forwarded together with the registration form. The Bank Draft should be purchased at your bank and made out in USD to **IFLA 2001**. It is regretted that personal or company checks cannot be accepted.

2. Bank transfer in USD to Riggs Bank, 1528 Connecticut Avenue, NW, Washington DC 20036, USA, account number 17-315-893 of Congrex Holland - IFLA 2001 (swiftnumber RGGSUS33, ABA number 054000030), with reference: **family name** and IFLA 2001.

3. Holders of American Express Card, Eurocard/Mastercard and Visa/JCB may use their credit cards for charging all the costs. Your card number, expiry date and signature should be filled in on the registration form.

4. Bank transfer in USD to ABN AMRO Bank, Vijzelstraat 68 & 78, Amsterdam, The Netherlands. Account number 55.56.17.017 of Congrex Holland BV - IFLA 2001 (swiftcode ABN ANL2A), with reference: family name and IFLA 2001.

Latest Revision: *August 3, 2001*

International Federation of Library Associations and Institutions
www.ifla.org

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

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IMPORTANT ADDRESSES

Conference Secretariat

CONGREX HOLLAND BV
P.O. Box 302
1000 AH Amsterdam
The Netherlands

Tel: +31 20 50 40 206
Fax: +31 20 50 40 225

E-mail: ifla2001@congrex.nl
Website: www.congrex.com

IFLA Headquarters

P.O. Box 95312
2509 CH The Hague
The Netherlands

Tel: +31 70 314 0884
Fax: +31 70 383 4837

Website: www.ifla.org

IMPORTANT DEADLINES

Early registration: May 15, 2001

Late registration:	August 1, 2001
Hotel guarantee:	July 15, 2001
Paper submission:	June 1, 2001

Latest Revision: *October 18, 2000*

International Federation of Library Associations and Institutions
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67th IFLA Council and General Conference

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IFLA Express 2001

IFLA Express is a daily newsletter in English, which will be published during the Conference by the National Organizing Committee in collaboration with the IFLA Secretariat to give delegates information of general interest, and information from IFLA Secretariat, Divisions and Sections, and from the National Organizers. In addition two pre-conference issues of IFLA Express will appear in January and May/June 2001 with the latest news on the conference.

IFLA Express 1 (January)

IFLA Express 2 (May/June)
IFLA Express Nº 2 en Espanol
[Adobe Acrobat PDF:1341 KB]

Latest Revision: *August 14, 2001*

International Federation of Library Associations and Institutions
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International Federation of Library Associations and Institutions

67th IFLA Council and General Conference

Hospitality Task Force: Links

Hospitality Home | IFLA 2001 Home | IFLA Home
NEW Volunteer Manual NEW | Boston Map
Map of Hynes Area | Hynes Floor Plans | Hynes Area Business Locations

Boston	Boston Travel Guides	Children & Family Links	Consulates, Embassies,
Discounts	Ethnic Associations	Financial Services	History
International Travel	Language	Local Transporation	Maps & Driving Directions
Media	Miscellaneous	Museums	Neighborhoods
New England	Parks	Places of Worship	Restaurants
Shopping	Sports	Things to Do	Walking Tours

Boston Public Library Quick Reference Sources
Brown University Virtual Reference Collection

☺ = especially good for children | See also: Touring with Children in Boston

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Boston:

- Greater Boston Convention and Visitors Bureau http://www.bostonusa.com

- **Best of Boston (Boston Magazine)**
  http://www.bostonmagazine.com/bestofboston2000/
- **Boston.com**
  http://www.boston.com/
- **Boston City Search**
  http://boston.citysearch.com/
- **Boston Digital City**
  http://www.digitalcity.com/boston/
- **Boston Online**
  http://www.boston-online.com/
- **Gay & Lesbian Boston Links**
  http://www.boston-online.com/Gay/
- **Yahoo: Boston**
  http://dir.yahoo.com/Regional/U_S__States/Massachusetts/Metropolitan_Areas/Boston_Metro/

Boston Travel Guides:

- **Boston.com Travel**
  http://travel.boston.com/boston/
- **cnn.com City guides: Boston**
  http://www.cnn.com/TRAVEL/CITY.GUIDES/WTR/north.america.profiles/nap.boston.html
- **Discount Travel Guide: Boston**
  http://boston.discounttravelguide.com/index.html
- **Hoover's Online: Destination Guides: Boston**
  http://www.hoovers.com/travel/dir/0,2116,14591,00.html
- **Lonely Planet Guide to Boston**
  http://www.lonelyplanet.com/dest/nam/bos.htm
- **Metropolitan Web: All for the Boston Bound**
  http://members.aol.com/FAYTHin/Faythin.html

Children & Family Links:

See also: Touring with Children in Boston

- **Boston Digital City: Kids & Family**
  http://www.digitalcity.com/boston/family/
- **Boston Globe Kids Corner**
  http://www.boston.com/globe/calendar/kids_corner.htm
- **Boston National Historical Park: Junior Ranger Program**
  http://www.nps.gov/bost/pphtml/kids.html <
- **Time Out Boston: Kids**

http://www.timeout.com/boston/kids/

Consulates, Embassies, Ethnic Associations:

- **All of the Embassies in Washington, D.C.**
  http://www.embassy.org/embassies/index.html
- **Amsterdam Boston Connection**
  http://geocities.com/Augusta/6289/
- **Boston Ancestry and Nationality**
  http://130.166.124.2/bos_2.html
- **Boston en Espanol**
  http://www.bostonenespanol.com/
- **Boston Irish Information Center**
  http://globalaction.pair.com/boston/irish.html
- **The French Library and Cultural Center**
  http://www.frenchlib.org/
- **Foreign Consular Offices in the U.S.**
  http://www.state.gov/www/travel/consular_offices/fco_index.html
- **League of United Latin American Citizens**
  http://amlweb.com/lulac
- **International Institute of Boston**
  http://www.dreamsoffreedom.org/IIBTempHome.htm

Discounts:

- **CityPass Boston - Admission to 6 famous attractions for one low price**
  http://www.citypass.net
- **Half-Price Day-of-Show Tickets and More**
  http://www.boston.com/artsboston/Bostix.htm

Financial Services:

- **Universal Currency Converter**
  http://www.xe.net/ucc/
- **Oanda.com: The Currency Site**
  http://www.oanda.com/convert/classic

History:

- **Boston African American National Historic Site** http://www.nps.gov/boaf/

- **Boston Historical Society and Museum**
  http://www.bostonhistory.org/
- **Historic Buildings**
  http://www.iboston.org/buildings/building_index.html
- **iBoston: Historic Legacy of Boston**
  http://www.iboston.org/
- **John F. Kennedy Library**
  http://www.cs.umb.edu/jfklibrary
- **John F. Kennedy National Historic Site (birthplace)**
  www.nps.gov/jofi
- **Massachusetts 54th Colored Regiment (Mural**
  http://www.iboston.org/buildings/building%20resources/shaw2.htm
- **National Historic Landmarks in Boston**
  http://www.bostonpreservation.org/nhl.html
- **Paul Revere House**
  http://www.paulreverehouse.org/
- **Old North Church**
  http://www.oldnorth.com/

International Travel:

- **U.S. Customs Service**
  http://www.customs.ustreas.gov/
- **Logan Airport**
  http://www.massport.com/logan/default.asp
- **Airline Contact Information**
  http://www.massport.com/logan/airli.html

Language:

- **Your Dictionary**
  http://www.yourdictionary.com/
- **The Wicked Good Guide to Boston English**
  http://www.boston-online.com/glossary.html

Local Transportation:

- **Getting to and from Logan Airport**
  http://www.massport.com/logan/getti.html

- **Massachusetts Bay Transportation Authority (MBTA)**
  http://www.mbta.com/

Maps & Driving Directions:

- **Boston Map**
  http://www.jbhynes.com/Directions/images/map2.gif
- **Boston Subway Map**
  http://www.mbta.com/schedmaps/subway/index.cfm
- **Directions to the Hynes Convention Center**
  http://www.jbhynes.com/mcca_prop/hynes/directions/index.htm
- **Floor Plans of the Hynes Convention Center**
  http://www.jbhynes.com/mcca_prop/hynes/about/floor_plans/index.htm
- **Map of Hynes Convention Center Area**
  http://www.jbhynes.com/Directions/images/map.gif
- **Maps and Driving Directions from Yahoo**
  http://maps.yahoo.com/py/maps.py
- **MBTA Schedules and Maps**
  http://www.mbta.com/schedmaps/index.cfm
- **National Park Service Maps**
  http://www.nps.gov/boaf/pphtml/maps.html
- **Traffic Advisories**
  http://www.bigdig.com/thtml/traf_latest.htm

Media:

- **Boston Globe**
  http://www.boston.com/globe
- **Boston Herald**
  http://www.bostonherald.com/
- **Boston Magazine**
  http://www.bostonmagazine.com/
- **Boston News**
  http://www.enn2.com/bosnews.htm
- **Boston Phoenix**
  http://www.bostonphoenix.com/
- **Foreign Newspapers at the Boston Public Library**
  http//www.bpl.org/research/newspapers/fornews.htm
  also available in PDF format
- **MP3 Boston Music**

http://mp3.boston.com

- **Other Boston Media Links (Boston Public Library)**
  http://www.bpl.org/WWW/telref/telref_links.asp#news

Miscellaneous:

- **The Best Public Toilets in Boston**
  http://www.besttoilets.com/boston/
- **The "Big Dig" (Central Artery/Tunnel Project)**
  http://www.bigdig.com/
- **Bizarro Boston**
  http://www.boston-online.com/bizarro.html
- **Boston and Massachusetts Educational Institutions**
  http://globalaction.pair.com/boston/boston_education.html
- **Boston Restrooms**
  http://www.boston-online.com/restrooms.html
- **Postage Rates and Fees**
  http://www.usps.gov/
- **Quick Reference Sources (Boston Public Library)**
  http://www.bpl.org/WWW/telref/telref_links.asp

Museums:

- **American Textile History Museum (Lowell, MA)**
  http://www.athm.org/sites/boston/bostonftp/athm35/home.html
- **Children's Museum**
  http://www.bostonkids.org/
- **Computer Museum** (now part of the Museum of Science)
  http://www.mos.org/tcm/tcm.html
- **Dreams of Freedom (Immigration Museum)**
  http://www.dreamsoffreedom.org/
- **Harvard University Art Museums**
  http://www.artmuseums.harvard.edu/
- **Institute of Contemporary Art**
  www.icaboston.org
- **Isabella Stewart Gardner Museum**
  http://www.boston.com/gardner/
- **Museum of Afro-American History**
  http://www.afroammuseum.org/

- **Museum of Fine Arts, Boston**
  http://zoonewengland.com/
- **Museum of Science**
  http://www.mos.org/home.html
- **Museum of Transportation (Brookline, MA)**
  http://www.mot.org/index_flash.html
- **Museums and Points of Interest**
  http://www.bgladco.com/museums/museum.htm

Neighborhoods:

- **Beacon Hill Online**
  http://beaconhillonline.com/
- **Boston Chinatown**
  http://www.tuanphan.net/chinatown/
- **Harvard Square**
  http://www.harvardsquare.com/
- **North End**
  http://www.northendweb.com/
- **South Shore**
  http://southshoreserver.com/

New England:

- **Bay State Cruises**
  http://www.provincetownfastferry.com/
- **New England Online Visitor's Site**
  http://www.abbington.com/vistiors.html
- **Committee for a New England Bibliography**
  (Citations to books and articles on New England regional, state, and local history)
  http://nebib.uvm.edu
- **Salem, Massachusetts: City Guide**
  http://www.salemweb.com/default.htm

Parks:

- **Boston Harbor Islands National Recreation Area**
  http://www.nps.gov/boha/
- **National Park Service**

http://www.nps.gov/

Places of Worship:

- **Islamic Society of Boston**
  http://www.isboston.org/v1/index.htm
- **Nearby Places of Worship (Northeastern University)**
  http://www.neu.edu/spiritual_life/local_worship.html
- **Off-campus Places of Worship (Boston University)**
  http://web.bu.edu/CHAPEL/ChapelWebpages/worship.html
- **Places of Worship (by denomination)**
  http://www.digitalcity.com/boston/family/article.dci?aid=1166

Restaurants / Food:

- **Boston Baked Beans**
  http://www.curriculumunits.com/crucible/projects/boston_b.html
- **Bostonchefs.com**
  http://bostonchefs.com/
- **Boston.com Restaurants & Reviews**
  http://ae.boston.com/dining/
- **Boston Cream Pie**
  http://www.cuisinemagazine.com/recipes/boston_creampie.html
- **CuisineNet Restaurant Central - Boston**
  http://www.cuisinenet.com/restaurant/boston/index.shtml
- **Foodline Boston**
  http://foodline.com/articles/
- **Guide to Vegetarian Restaurants**(revision in process)
  http://old.veg.org/veg/Guide/USA/Massachusetts/Boston.html
- **Laura's Guide to Buying Chocolate in Boston**
  http://www.princeton.edu/~lfl/choc.html
- **Samuel Adams Boston Lager**
  http://www.samadams.com/beer/styles/boston_lager.html
- **Zagat Guide**
  http://www.zagat.com

Shopping:

- **Boston Shopping**
  http://www.visitboston.org/shopping.html

- **Boston.com Shopping**
  http://shopping.boston.com/
- **Discount Travel: Boston Shopping**
  http://boston.discounttravelguide.com/shopping.html
- **Discover Newbury Street**
  http://www.newbury-st.com/
- **Shops at the Prudential Center**
  http://www.prudentialcenter.com/

Sports:

- **Boston Bruins (Hockey)**
  http://www.bostonbruins.com/
- **Boston Celtics (Basketball)**
  http://www.nba.com/celtics/
- **Boston Red Sox (Baseball)**
  http://www.redsox.com/
- **Fenway Park (Historic Home of the Boston Red Sox)**
  http://redsox.mlb.com/NASApp/mlb/bos/ballpark/bos_ballpark_history.jsp
- **New England Patriots (Football)**
  http://www.patriots.com/

Things to Do:

- **Boston Duck Tours**
  http://www.ducktours.com/
- **Boston Tea Party - Ship (replica) & Museum**
  http://www.bostonteapartyship.com/
- **Bull & Finch Pub (setting for TV series "Cheers")**
  http://www.cheersboston.com
- **Franklin Park Zoo**
  http://zoonewengland.com/
- **John Hancock Observatory**
  http://www.jhancock.com/company/observatory/
- **Make Way for Ducklings Site**

http://www.iboston.org/buildings/building%20resources/ducklings.htm

- **The Mapparium, Christian Science Publishing Society**
  http://www.tfccs.com/GV/TMC/TOURS/Mapparium.html
- **New England Aquarium**
  http://www.neaq.org
- **Swan Boats, Boston Public Garden**
  http://www.expedia.com/wg/North_America/United_States/P23614.asp
- **USS Constitution ("Old Ironsides")**
  http://www.USSconstitution.navy.mil/
- **Whale Watches**
  http://www.neaq.org/visit/whalewatch.html

Walking Tours:

- **Boston by Foot (fee charged)**
  http://www.bostonbyfoot.com/
- **Boston by Sea: The Maritime Trail**
  http://www.bostonbysea.org/main.html
- **Boston Women Remembered**
  http://cox-marylee.tripod.com/introduction.htm
- **The Freedom Trail**
  http://www.thefreedomtrail.org/
- **The Black Heritage Trail**
  http://www.afroammuseum.org/trail.htm
- **Boston Immigrant Walking Trail**
  http://www.bostonfamilyhistory.org/
- **Boston National Historical Park (Park Ranger Tours)**
  http://www.nps.gov/bost/pphtml/activities.html
- **Boston Women's Heritage Trail**
  http://bps.boston.k12.ma.us/bwht/home.HTM
- **Frommer's Walking Tour Suggestions**
  http://www.frommers.com/destinations/boston/0004020033.html
- **GeoTrail: A Self-Guided Walking Tour to the Big Dig**
  http://www.engineers.org/asce98/geotrail/
- **Irish Heritage Trail**
  http://www.irishheritagetrail.com/
- **The Literary Trail of Greater Boston (fee charged)**
  http://www.literarytrail.org/html/overview.html
- **North End Walking Tours**

http://www.northendboston.com/tours.html

Comments to: Jean_Rainwater@brown.edu
Last Updated: Saturday, 18-Aug-2001 07:51:28 EDT
URL: http://www.brown.edu/Facilities/University_Library/test/iflahosp/links.htm

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President's Reception after Closing Ceremony

SOCIAL AND CULTURAL ACTIVITIES

Boston has a lot to offer and a variety of social and cultural activities are planned for delegates attending the 67th IFLA Council and General Conference. The delegates will have the opportunity to visit some of Boston's renowned institutions and at the same time interact with their colleagues from other countries.

Reception for IFLA Officers

(by invitation only)
Date: Saturday, August 18, 2001

Exhibition Opening and Reception

Date: Sunday, August 19, 2001
Location: Hynes Convention Center

Opening Party with Cultural Performances

Date: Monday, August 20, 2001
Location: Boston Public Library

Cultural Evening

Date: Tuesday, August 21, 2001
Location: Museum of Sciences

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Library Tours

Date: Wednesday, August 22, 2001 and Thursday, August 23, 2001
Location: Several libraries in Boston and surroundings

Consulate Receptions

Date: Wednesday, August 22, 2001

Receptions and Cultural Performances

Date: Thursday, August 23, 2001
Location: Harvard University and Massachusetts Institute of Technology

President's Reception after Closing Ceremony

Date: Friday, August 24, 2001
Location: Hynes Convention Center

Latest Revision: *October 18, 2000*

International Federation of Library Associations and Institutions
www.ifla.org

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LIBRARY TOURS

Delegates will be offered the opportunity to tour a variety of libraries in Boston and the surrounding area on Wednesday Afternoon, Thursday Morning and Afternoon. Most of the tours will be for half-a-day

Individual Library Visits

Individual library visits are welcome by the Boston libraries listed below. The visits can be arranged on request during the conference at the Library Tours and Visits Desk in the Registration Area. Transportation will be at your own expense.

1. Acme Bookbinding - http://www.acmebook.com
2. Adult Literacy Resource Institute - http://alri.org
3. AIDS Action Committee, HIV Health Library - http://www.aac.org
4. Arlington Public Library, Robbins Library
5. Berklee College of Music Library - http://library.berklee.edu
6. Beth Israel Deaconess Med. Ctr. Agoos Medical Library - http://home.caregroup.org/departments/library
7. Beth Israel Hospital Learning Center
8. Boston College High School, Corcoran Library - http://www.bchigh.edu
9. Boston College, Thomas P. O'Neill Jr. Library - http://www.bc.edu/bc_org/avp/ulib/bclib.html
10. Boston Globe Library - http://www.boston.com (click Globe Online)
11. Boston Psychoanalytic Society Library - http://bostonpsa.org
12. Boston Public Library, Kirstein Business Branch - http://www.bpl.org/www/KBB/KBBHOME.html
13. Boston University, Mugar Library - http://www.bu.edu/library/

Business and Finance Libraries

Government Libraries

Art Libraries

Music Libraries

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14. Brandeis University Libraries - http://brandeis.edu
15. Brigham & Women's Hospital, Michele & Howard Kessler Health Education Library, Brigham & Women's Hospital Medical Library - http://www.bwh.partners.org/medlib
16. Bunker Hill Community College Library
17. Cambridge Public Library - http://www.ci.cambridge.ma.us/~CPL
18. Children's Hospital Hospital Library
19. Dana Farber Cancer Inst., Baruj Benacerraf Library
20. Emerson College Library - http://library.emerson.edu
21. Federal Reserve Bank of Boston, Research Library - http://www.bos.frb.org
22. First Chruch of Christ, Scientist Mary Baker Eddy Library - http://www.marybakereddy.org
23. French Library & Cultural Center - http://www.frenchlib.org
24. Harvard University Libraries Francis A. Countway Library of Medicine - http://www.countway.harvard.edu
25. MonroeC. Gutman Library in the Graduate School of Education - http://www.gse.harvard.edu/~library/
26. Kennedy School of Government Library - http://ksgwww.harvard.edu/~library/
27. Hebrew College Library - http://www.hebrewcollege.edu/library
28. Hellenic College/Holy Cross Greek Orthodox School of Archbishop Iakovos Library - http://www.hchc.edu
29. Theology Insurance Library Association of Boston - http://www.insurancelibrary.org
30. Malden Public Library - http://mbln.lib.ma.us/malden/index.htm
31. Massachusetts College of Art, Morton R. Godine Library - http://massart.edu/at_massart/
32. Massachusetts College of Pharmacy and Health Sciences, Sheppard Library - http://mcp.edu
33. Massachusetts Library & Information Network Library - http://mlin.lib.ma.us
34. Massachusetts Eye & Ear Infirmary Library
35. Massachusetts General Hospital Treadwell Library - http://www.mgh.harvard.edu/library/library.htm
36. Massachusetts Institute of Technology, MIT Libraries - http://libraries.mit.edu
37. Museum of Fine Arts William Morris Hunt Memorial Library - http://www.mfa.org
38. Museum of our National Heritage Van Gorden-Williams Library - http://www.monh.org

39. Museum of Science Harrison Lyman Library - http://www.mos.org
40. New England College of Optometry, Library - http://www.ne-optometry.edu/library
41. New England Conservatory of Music, Library - http://www.newenglandconservatory.edu/library
42. New England Historic Genealogical Society - http://www.NewEnglandAncestors.org
43. New England School of Law, Library - http://www.nesl.edu
44. Newton Free Library - http://www.ci.newton.ma.us (Choose Library)
45. Northeastern University Snell Library - http://www.library.neu.edu
46. Perkins School for the Blind, Samuel P. Hayes Research Library - http://www.perkins.pvt.k12.ma.us
47. Qunicy Public Library, Thomas Crane Library - http://ci.quincy.ma.us/tcpl
48. Simmons College Library - http://www.simmons.edu/resources/libraries
49. Soc. For the Preservation of new England Antiquities Library & Archives - http://www.spnea.org
50. State Library of Massachusetts - http://www.state.ma.us/lib/
51. State Transportation Library of Massachusetts - http://www.stlibrary.org
52. Suffolk University School of Law Sawyer Library - http://www.law.suffolk.edu
53. Temple Israel, Synagogue Library - http://www.tisrael.org
54. Tufts University, Health Sciences Library - http://www.library.tufts.edu/hsl/hsl.html
55. Tufts University, Tisch Library - http://www.library.tufts.edu/tisch
56. U.S. Court of Appeals, First Circuit Library
57. US Environmental Protection Agency, Region 1 Library - http://www.epa.gov/region01
58. Wheelock College Library - http://www.wheelock.edu/library/libhome.html

Organized Library Tours

Public Libraries

Boston Public Library
Date: Tuesday, August 21, 2001
Time: 10 a.m. & 2:30 p.m.

Date: Wednesday, August 22, 2001
Time: 10 a.m. & 2:30 p.m.

Date: Thursday, August 23, 2001
Time: 10 a.m. & 2:30 p.m.

Date: Friday, August 24, 2001
Time: 10 a.m.

The Boston Public Library was the first large free municipal library in the United States and the first public library to allow patrons to borrow books, the first public library to issue an annual report, the first library to institute a branch system, and the first public library to establish a separate children's room. It is the largest public research library in New England with collections of over 6 million books and 11 million other items.

Tours - Meet in the lobby of the General Library (Boylston Street entrance). No pre-registration necessary. Tour lasts approximately one hour.

Newton Public Library
Date: Thursday, August 23, 2001
Transportation: Bus

The Theodore D. Mann Building of the Newton Free Library opened to an appreciative public in 1991. Customers make nearly 600,000 visits to the library each year and borrow 1,400,000 items. The 91,000 square foot red brick building holds collections totaling 400,000 books and audio visual items, and there are 32 pcs providing high speed internet access. The library also provides a full range of cultural and educational programs for children and adults, services to the homebound, and a literacy program. An Information Technology Training Center provides classes in electronic resources.
Website: www.ci.newton.ma.us/library/index.htm OR www.ci.newton.ma.us and click onto Library

Concord Public Library
Date: Wednesday, August 22, 2001
Transportation: Bus

The Concord Free Public Library in addition to having one of Massachusett's highest per capita circulations is housed in a building originally built in 1873. Ralph Waldo Emerson was one of its first chairs of the Library Committee and a statue of him sculpted by Daniel Chester French, another native son, presides over the Library patrons. A Special Collections department houses the Town's Archives from its 1635 beginnings through the Revolution, the Transcendental period when Thoreau betook himself to neighboring Walden Pond to the present. The collections include the family papers of townspeople of the 17th-20th centuries, the original plates of Herbert Gleason who was sent at the turn of the century by the new US Forestry Service to photograph the areas they hoped to set aside as national parks, as well as manuscripts and letters of Concord's famous literary figures.

Quincy Public Library
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

Designed by Henry Hobson Richardson, an outstanding American architect of the time, the Thomas Crane Public Library opened in 1882. Over 100 years later it was designated a national landmark. It is noteworthy for its use of granite and brownstone on the exterior and North Carolina pine and LaFarge stained glass windows in the interior. The Aiken wing was added in 1908 followed in 1939 by the Coletti addition. The CBT addition, respectful of its companion buildings while maintaining a present-day vitality, opened in 2000. The general collection has subject strengths in art, music and local history. It also, reflects books in different formats made possible by evolving technologies. Traditional library services are bolstered by a vibrant literacy project and a dual-agency outreach program.
Website: www.ci.quincy.ma.us/tcpl

Academic Libraries

Brown University
Date: Wednesday, August 22, 2001
Transportation: Bus

Brown University is one of the oldest universities in the United States. The Library's collections reflect the University's dual mission as research institution and liberal arts college. The Library is now in a complex transitional phase, as it goes through a re-organization process, as it tries to balance print and electronic resources, and as it tries to provide services to users both on and off-campus.
Website: www.brown.edu/Facilities/University_Library

Boston University - African Studies Library

Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The African Studies Library (ASL), founded in 1953 as the departmental library of the African Studies Center, and now a department of Mugar Memorial Library, supports Boston University's undergraduate, graduate and faculty research on Africa and serves as a resource for the broader community's African interests, nationally and internationally. The collection is interdisciplinary, with major strengths in the social sciences and broad representation of the humanities and sciences. In its reading room and stack area on the sixth floor of Mugar Memorial Library, the staff provides reference and research service and access to current periodicals from and about Africa, African newspapers, maps, African documents and government publications, and books in African history. The rest of the 155,000 volumes dealing with Africa are shelved within their subject classifications throughout Mugar memorial Library and its branches.

Website: www.bu.edu/library/asl/home.html

Boston University - Pardee Management Library
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The Frederick S. Pardee Management Library opened in 1997 and is designed to serve the evolving needs of the Boston University School of Management. The Library, a branch of the Mugar memorial Library, provides information services electronic and print resources in management and management-related fields including health care management and public management. The library's resources include a print collection of 91,000 volumes, approximately 350 current serials, and electronic resources.

Website: www.bu.edu/library/management/

Boston College
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The Libraries at Boston College view providing research and information support services as a fundamental element of our mission to our faculty, students, and staff, and to scholars everywhere who access our collections and resources. In addition to emphasizing personal services, the Libraries' have been leaders on campus in distributing services remotely, in keeping with the University's stated mission to aggressively seek out and create technological solutions that will enhance teaching, learning, scholarship, and research productivity.

The Boston College Libraries' collections offer a wealth of resources for research, teaching, and learning, including more than 1.7 million printed volumes and 2 million microforms, as well as serials, government documents, media, and a digital library of electronic resources. The Libraries' primary materials range from unique, illuminated medieval manuscripts to the latest online financial data. The Boston College Libraries Preservation Program is an integral component of the Libraries' collection development initiatives.
Website: www.bc.edu/bc_org/avp/ulib/bclib.html

Harvard University Library

Libraries of Harvard Faculties:

The Monroe C. Gutman Library

Date: Wednesday, August 22

The Monroe C. Gutman Library of the Harvard Graduate School of Education was established at the time the School was founded in 1920. In 1972 the present library building was erected on Appian Way and named after its benefactor, Monroe C. Gutman, a Harvard alumnus. Gutman Library houses an extensive collection of scholarly works published in the English language in the broad fields of education, educational psychology, and human development. Areas of focus include educational policy and administration, elementary and secondary education, educational innovations, teachers and teaching, and the history of education. Gutman Library will be nearing the completion of a major renovation at the time of the IFLA meeting in Boston and, while our building and core collections will be open to visitors, the Library's historical collections will be unavailable for viewing.

The Francis A. Countway Library of Medicine

Date: Wednesday, August 22

The Francis A. Countway Library of Medicine was created in 1960 with a formal agreement uniting the Boston Medical Library and the Harvard Medical School Library. The Countway Library offers users a superb collection of medical books and journals in both print and electronic formats, databases and Web sites, training in the use of these resources and one of the finest collections of manuscripts, rare books and historical works in existence. The resources of the Library include a highly trained and enthusiastic staff.
Countway's Web site url is:

http://www.countway.harvard.edu

The Frances Loeb Library

Date: Thursday, August 23

The Frances Loeb Library of Harvard's Graduate School of Design supports training and research in the fields of architecture, landscape architecture, and urban design and planning. The library holds over 270,000 volumes of monographs, pamphlets and periodicals, 215,000 slides, photographs, maps and plans. The Special Collections Department includes 15,000 rare books, the Le Corbusier Research Collection, and 52 special collections of archival materials documenting the work of noted practitioners. The library was recently renovated to provide better organization of its public services, visual resources, technical services, and its Instructional Technology Group, a unit within the library that develops computer tools and services to push information to faculty, students and researchers. Website: www.gsd.harvard.edu/library

The Harvard Law School Library

Date: Thursday, August 23

The Harvard Law School Library is the second largest library at Harvard and the world's largest academic law library collection, exceeding 2 million volumes and volume equivalents. By collecting from every national jurisdiction in the world, the Library has accumulated one of the world's great international and foreign law library collections. It also is fortunate to have an extensive and exceptional collection of rare books, manuscripts and art. A recent extensive renovation of Langdell Hall, the library's principal home, has created for the students and faculty a technologically modern and comfortable facility for research and study. For further information about the library, please visit http://www.law.harvard.edu/library.

The Arthur and Elizabeth Schlesinger Library

Date: Thursday, August 23

The Arthur and Elizabeth Schlesinger Library on the History of Women in America has been at the forefront of collecting, cataloging and making available for research those papers, books, and other materials essential for understanding women's lives and contribution. The Schlesinger Library is a national resource open to all. Website: http://www.radcliffe.edu/schles/

Harvard College Library

http://www-hcl.harvard.edu

Godfrey Lowell Cabot Science Library
Date: Wednesday, August 22

http://www-hcl.harvard.edu/cabot/

Collections support a broad range of sciences including astronomy, biochemistry, biology, chemistry, physics, zoology, history of science, agriculture, engineering, and environmental science. It also holds research collections in pure mathematics and theoretical statistics.

Houghton Library
Date: Wednesday, August 22

http://www-hcl.harvard.edu/houghton/

Primary repository for Harvard's rare books and manuscripts. Collections focus on the study of Western Civilization, particularly European and American history and literature. Includes special collections in printing, graphic arts, and the theater.

Littauer Library
Date: Wednesday, August 22

http://www-hcl.harvard.edu/littauer/

Supports the Social Sciences Program and includes books and journals on economics, government, and political science, with special collections focusing on industrial relations.

Tozzer Library
Date: Wednesday, August 22

http://www-hcl.harvard.edu/tozzer/

Houses one of the world's foremost collections supporting the study of anthropology, extending to all its subfields, including archaeology. Renowned for collections relating to the indigenous people of the Americas.

Fine Arts Library
Date: Thursday, August 23

http://www-hcl.harvard.edu/finearts/

One of the world's most comprehensive academic art libraries. Covers all of Western and non-Western art and architecture, from antiquity to the present. Special collections in East Asian and Islamic art and architecture.

Harvard-Yenching Library
Date: Thursday, August 23

http://www-hcl.harvard.edu/harvard-yenching/
Most extensive academic research collection on East Asian materials outside of Asia. Collection consists of publications in the humanities and social sciences on traditional and modern East Asia. Renowned for its rare books and manuscripts.

Hilles Library
Date: Thursday, August 23
http://www-hcl.harvard.edu/hilles/
Supports general undergraduate studies in the humanities and social sciences, and contains the Morse Music Library, which houses a collection of contemporary sound recordings.

Lamont Library
Date: Thursday, August 23
http://www-hcl.harvard.edu/lamont/
General undergraduate college library supporting humanities and social sciences curriculum. Houses the Woodberry Poetry Room, which contains a special collection of contemporary poetry.

Eda Kuhn Loeb Music Library
Date: Thursday, August 23
http://www-hcl.harvard.edu/loebmusic/
One of the world's preeminent libraries supporting music research. Materials include thousands of books, scores, and recordings; a world music archive; the world's largest collection of Turkish and Indian classical music; and an extensive Mozart archive.

Special Libraries at Harvard:

Museum of Comparative Zoology
Ernst Mayr Library
Date: Wednesday, August 22
26 Oxford St., 2nd Floor, Cambridge, MA 02138
http://www.mcz.harvard.edu/mayr.lib/
The Ernst Mayr Library collects works in the fields of systematic zoology, general zoology (comparative anatomy and physiology), organismal biology, biodiversity, conservation biology, ecology, evolutionary biology, marine biology, biological oceanography, ethology, and paleontology. In addition, the library has an extensive early natural history collection, as well as Special Collections consisting of many old and rare volumes including the papers of Louis

Agassiz and others associated with the Museum, and natural history art. The archives of the MCZ are also here. There are 109,000 monographs and 2223 currently received serial titles.

Harvard University Herbaria
Botany Libraries
Date: Wednesday, August 22

22 Divinity Avenue, Cambridge, MA 02138
http://www.herbaria@harvard.edu/Libraries/libraries.html

The Botany Libraries comprise the administrative unit that oversees the five collections of the Harvard University Herbaria: the Cambridge portion of the Library of the Arnold Arboretum, the Gray Herbarium Library, the Farlow Reference Library of Cryptogamic Botany, the Oakes Ames Economic Botany Library, and Orchid Library. Collections include the literature of plant taxonomy, Old and New World floras, economic botany, ethnobotany, Linneana, plant exploration, concepts of evolution, cryptogamic botany (fungi, mosses, lichens, algae), and plant science related bibliographies and biographies. Collections also include maps and archival holdings of correspondence, manuscripts, photographs, botanical art, specimens, and other artifacts. Combined holdings exceed 272,000 volumes and date from the late 15th century.

MIT
Date: Thursday, August 23, 2001

The MIT Libraries include five major subject libraries (architecture and planning; engineering; humanities; science; social sciences and management) and several branch libraries in specialized subject areas. The Libraries' webpage (http://libraries.mit.edu/) presents information about library services and its collection of more than 2.5 million volumes and other materials, and online access to over 200 databases and over 1600 electronic journal titles.

Those interested in visiting MIT may choose one of the following tours:

1. **General.** Visitors will learn about the MIT Libraries and tour a few of the locations.
2. The **Barker Engineering Library** is located under the Great Dome of MIT, in the same space created for an engineering library when the Institute's original neoclassical buildings were first opened in 1916. Now the library provides innovative services to support engineering study and research, and contains

a premier collection of engineering literature.

3. The 1996 renovation of the **Lewis Music Library** combines a highly efficient use of space with an elegant beauty. A curved mezzanine, defined with glass panels with an etched piece of music by Pulitzer-Prize winning composer John Harbison for the library, contains custom-built listening carrels and other specialized music spaces. The extensive collection is housed in compact shelving.
4. The collection of the **Rotch Library of Architecture and Planning** began in 1866 and has continuously developed since that time. Special features are collections in architectural and art history and in urban and regional planning, a collection of rare materials dating from the 16th century, the Aga Khan Collection on architectural design and urban history in Islamic cultures, and the Rotch Library Visual Collections.
5. The **Aeronautics/Astronautics Library** moved to a new facility in the Fall of 2000 as part of its academic department's project to create a Complex Systems Development and Operations Laboratory, integrating the information services of the library with student engineering design work. Visitors will learn about the library services and its in-depth current and retrospective collection, and will visit the teaching laboratory.
6. **DSpace.** The Libraries are in the midst of a $1.8 million two-year joint project with the Hewlett-Packard Company to build a digital repository of articles and multimedia content produced by MIT authors. Issues addressed are storage, submission, retrieval, searching, access control, rights management, and publishing capabilities. Project staff will present a progress report and discuss the applicability of this new technology to other institutions.

Website: http://libraries.mit.edu

Northeastern University
Date: Wednesday, August 22, 2001 and Thursday, August 23, 2001
Transportation: Walking

The Northeastern University Libraries, with 925,000 volumes and extensive other resources, serve a population of 16,000 undergraduates and 4,000 graduate students in arts and sciences and in professional disciplines. Snell Library, a 240,000 gross square foot facility, opened in 1990. Tour highlights will include an interactive library instruction room for information literacy programs, a computer commons, a media center with its system for video transmission to classrooms, a new integrated library management system, and archives/special

collections. Time permitting, other educational technology sites, a TV training studio, and specialized labs, may be visited.
Website: www.lib.neu.edu

Emerson College
Date: Wednesday, August 22, 2001
Transportation: Walking

The Emerson College Library focuses on the communication arts and sciences. Collections emphasize performing arts, radio-television-film production and history, communication studies, speech and communication disorders, and writing/ publishing. The new Library (1999) was designed to facilitate group and individual study, and includes an electronic classroom for library instruction. The College Archives, located in the Library, provides a window onto Boston theatre in the twentieth century.
Website: www.emerson.edu/library

Tufts University
Date: Thursday, August 23, 2001
Transportation: Bus

The Tisch Library supports the teaching and research of the Arts, Sciences and Engineering School faculty, staff and students (4200 undergrads and 1500 graduate students). Renovated and expanded in 1996 by Shepley, Richardson, Bulfinch and Abbott architectural firm, visitors frequently remark how inviting and well-organized the library is using state-of-the-art technology. Services of not include: Geographic Information Systems (GIS) Center, University Archives with electronic workflow linked to their website, Electronic Resources Center library instruction facility and a Media Center with 5 media classrooms.
Website: www.library.tufts.edu/tisch.html

Special Libraries

Northeast Document Conservation Center
Date: Thursday, August 23, 2001
Transportation: Bus

NEDCC is the largest non-profit, regional conservation facility in the United States. Founded in 1973 its services include the conservation of paper, books, and photographic materials, preservation microfilm and photoduplication services. Outreach programs (including surveys, workshops, and disaster assistance) are also essential NEDCC services.

NEDCC has become a national and international resource for conservation treatment and preservation education. In 1990, NEDCC moved its headquarters to a state-of-the-art conservation facility located in a restored mill building in Andover, MA.
Website: www.nedcc.org

Perkins School for the Blind
Date: Wednesday, August 22, 2001
Transportation: Bus

The library is a member of the Library of Congress/ National Library Service for the Blind and Physically Handicapped network of cooperating libraries. The 22,000 square foot campus facility which houses the mail-order public library program includes a recording studio, shipping/receiving operations, a 3,000 volume Braille collection, a 500,000 volume audio book collection, office functions, and example of adaptive workstations.

School Libraries

Lincoln Elementary School, Brookline High School
Date: Thursday, August 23, 2001
Transportation: Public Transportation

The Burack Library of Brookline high School is a busy, centrally located laboratory in a high school of 1800 students learn to find information in many formats. The professional staff of 3 library media specialists teaches information literacy and technology skills, and literature appreciation to classes and individual students in the context of all disciplines. The library space includes 42 computers, a classroom, a computer lab, and a multimedia production room. Library collections are chosen to support the curriculum of the school.
Website: www.brookline.mec.edu

Law Libraries

Social Law Library
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The social Law Library is a reference library serving Massachusetts lawyers, judges and their staffs. The library has a comprehensive collection of Anglo-American primary and secondary law sources. Thorough the website socialaw.com the Library gives its members access to numerous sources of primary Massachusetts jurisprudence

and administrative law.
Website: www.socialaw.com

U.S. Court of Appeals 1st Circuit Library
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

Located in the new federal courthouse on Boston Harbor. Opened in 1998. Architects: Pei Cobb Freed & Partners. 9th floor location has spectacular view. View of Boston across the harbor from the 9-story conoid window of the public gallery. Collection includes federal materials, treatises covering many subject areas, state materials for the 1st and 2nd circuits (MA, ME, NH, RI, Puerto Rico, NY, CT, VT). Spanish civil law material. Roughly 1/3 of the shelving is state-of-the-art motorized compact shelving. Contains the archive for the U.S. Court of Appeals, First Circuit

Medical Libraries

Countway Library of Medicine
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The Library houses toe collections of the Harvard Medical School library and the Boston Medical School library and the Boston Medical Library. The Library is one of the largest depositories for rare books, both in the United States and worldwide. In 2000, the Library underwent s $25 million renovation to upgrade the physical plant and to provide the networking capability necessary to handling digital information.
Website: www.countway.harvard.edu

Massachusetts General Hospital
Date: Thursday, August 23, 2001
Transportation: Public Transportation

Largest in country, oldest in country, hospital library with research, clinical, teaching and patient education focus, Consumer Health Reference Center for the state, innovative projects with Cancer Resource Room and Community Health Centers; Partners Librarians Network relationships, all librarians do reference model, increasing cross training
Website: www.mgh.harvard.edu/library/library.htm

Business and Finance Libraries

Fidelity Management
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

The Equity Research InfoCenter supports the Analysts and Portfolio Managers in the Equity Division at the Fidelity Management and Research Company. Each of our Information Consultants work closely with one of Equity's Sector focused Analyst Team, assisting with company valuation and stock performance research and industry and market analysis. We rely heavily on both bibliographic databases and financial databases such as FactSet, Stockval, FirstCall, Datastream and Haver. We have created an internal web site, which integrates internal and external industry research and provides a portal to InfoCenter and other internal and external research tools, including a web interface to our Equity Library Catalog.

Government Libraries

U.S. Environmental Protection Agency
Date: Wednesday, August 22, 2001
Transportation: Public Transportation

Located near popular tourist sites (Faneuil Hall and Holocaust Memorial), EPA New England Library is one of 10 US Environmental Protection Agency regional libraries with core collection of agency documents predominantly scientific/technical in nature. Includes a self-contained law library, special collections of New England materials, wetlands information, educational resources/curricula, videos, pamphlets and analytical test methods. There are three workstations for public access to CD ROMs and the Internet; a microfiche collection of Environment Abstracts since 1980 and a reader/printer.

Website: www.epa.gov/region01/oarm/index.html

Art Libraries

Museum of Fine Arts
Date: Wednesday, August 22, 2001
Transportation: Walking

The Main Library houses about 2/3 of the Library's collection, the remainder being hosed in 8 departmental libraries, including the School library. We have an interesting collection of artist's books, and a small number of rare books. The Library is situated just above the Huntington Avenue entrance; directly outside our door are the Sargent

murals, recently cleaned and quite magnificent.
Website: www.mfa.org/library/index.htm

Music Libraries

New England Conservatory of Music
Date: Wednesday, August 22, 2001
Transportation: Walking

Conservatory library with collection of 120,000 scores, sound recordings and books about music. Supports a college of about 750 music students enrolled in BM, MM and DMA degree programs. Special collections include manuscripts and 1st editions of Boston area composers active in the late 19th and early 20th centuries.
Website: www.newenglandconservatory.edu/libraries

Latest Revision: *July 31, 2001*

International Federation of Library Associations and Institutions
www.ifla.org

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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SIGHTSEEING TOURS

Pre-Post Conference Excursions

Boston and its environs offer an exciting venue for IFLA 2001 participants and their companions. There will be opportunities to shop, attend musical events, visit museums, and explore historic and cultural sites. You can walk the Freedom Trail, wander about Harvard Square, run along the Charles River Esplanade, or Cruise Boston's harbor and waterways.

Excursions are being arranged to the splendid mansions of Newport, Rhode Island, the villages and beaches of Cape Cod, the pastoral Berkshire Hills of western Massachusetts, and the quaint rockbound seacoast towns north of Boston. You'll even be able to experience the excitement of a whale watch off the New England coast or contemplate nature at Thoreau's house on Walden Pond. Other possibilities include the Mystic Seaport in CT, the Stockbridge Village and Lexington and Concord, MA., the White Mountains of New Hampshire or the Green Mountains of Vermont, the Isles of Shoals, and Strawberry Banks in Portsmouth, NH.

Please check the appropriate box on the registration form to receive more information concerning the pre- and post conference excursions.

Accompanying Person Tours

Boston - Yesterday and Today

Date: Monday, August 20, 2001
Duration:estimated 4 hours

Time of day: Morning
Fee:USD 35.-

This bus and walking tour focuses on Boston as it is today and how it developed. Boston is America's oldest city and reveals its history in overlapping layers. Although there will be significant amounts of historical information on this tour, the primary interest is in current life styles.

Highlights will include a tour of the Back Bay area, developed in the late 19th century, with a special stop at Trinity Church and at the John Hancock Tower for a view from the 60th floor Observation Lounge. We will also tour the South End, on the "cutting edge" in today's Boston where "gentrification" is gradually displacing an older mix of tenements and boarding houses.

We will stroll through Beacon Hill, where in the early 19th century the wealthy merchant families lived on the sunny South Slope and where the working class and African American families lived on the less desirable North Slope. And finally, we will explore the North End, home in the 18th century to American freedom fighters such as Paul Revere and home today to a colorful mix of Italian Americans and yuppies.

Cape Cod

Date: Tuesday, August 21, 2001
Duration:full day
Fee:USD 50.-

This is a long day but for many people a visit to New England is not complete without a visit to Cape Cod.

We leave early in the morning and head south to the Cape Cod Canal, approximately an hour from Boston. After crossing the Canal, we will make a break in Sandwich or Barnstable for coffee and a stroll out to the beach. From here we will continue along the King's Highway through charming villages as our escort provides commentary about what we are seeing. A special stop will be at the National Seashore Visitors Center before pushing on the Province Town.

"P'Town" is situated at the far tip of Cape Cod and combines old Portuguese fishing families with artists, writers, tourists and alternative life styles. It is also where the Pilgrims first landed in 1620. We will spend several hours here, during which time you may stroll the streets of this delightful community, have a lobster lunch, observe the natives, rent a bike, or go hiking or swimming.

Salem and Marblehead

Date: Wednesday, August 22, 2001
Duration:estimated 4 hours
Time of day: Morning
Fee:USD 35.-

Eighteen miles north of Boston, the two communities of Salem and Marblehead display the diversity of New England's maritime history.
In Salem the period between 1800 and 1830 (known as the China Trade Period) saw merchant ships circling the world and bringing back fabulous wealth and treasures. We will visit the Peabody Museum which has for over 200 years been the repository of artifacts from the Far East, from the South Pacific and indeed from all over the world. This museum is one of the true gems of New England. We will also view Chestnut Street where the mansions of this merchant class still stand.
Neighboring Marblehead is wonderful contrast. Here we will stroll the narrow lanes and passages between modest fishermen's homes (now sought after and expensive!) on our way to Crocker Park with a stunning vista over Marblehead Harbor, crowded with lobster boats, fishing trawlers and yachts. If time permits, we will conclude with a drive around Marblehead Neck with examples of lavish 19th century summer homes overlooking the water.

Museums of Presidents

Date: Thursday, August 23, 2001
Duration:estimated 4 hours
Time of day: Morning
Fee:USD 35.-

Only the Boston area can boast of two presidential libraries! We will visit both. Presidents John Adams and John Quincy Adamslived at "Peacefield", a lovely estate just ten miles south of Boston. The Adams family library displays the remarkable intellectual power of this family over four generations.
Our other library is the John Fitzgerald Kennedy Library

overlooking Dorchester Bay. We will concentrate our visit on the museum, which focuses on Kennedy's life and illustrates the nature of the office of the President of the United States in the sixties. A special additional treat will be passing by the birthplace of a fourth American President. You will find out who he is when we get there!

Lowell - Where Women's Lib began

Date: Friday, August 24, 2001
Duration:estimated 4.5 hours
Time of day: Morning
Fee:USD 35.-

Lowell National Park is devoted to the development of the American mill and textile industry that transformed New England from an agrarian society into an international industrial power. We will learn about the mill technology that freed America from the spinning wheel and handloom and lead to mass production and Henry Ford. But it was women who made up the first labor force in these mills. Here, for the first time, American women entered the commercial work world and started on the path that led to Women's Voting Rights and today's Women's Liberation.
We visit two fascinating sites. One is a typical boarding house where you get a deep impression of what life was like for these women, how their days were regimented by the paternalistic mill-owners, but also how they took advantage of the opportunity for independence and self-sufficiency. Then we visit the Boott Mill, a restored textile mill where you will learn what working conditions were like, how the mill technology was developed and how succeeding waves of immigrant labor replaced the farm girls through the nineteenth and into the twentieth centuries.

Saturday Sightseeing Tours

Whales!

Duration:estimated 8 hours
Fee:USD 50.-

An immensely popular excursion takes us out on the "foaming deep" to view whales -- splashing, feeding, breaching, spouting (and sometimes watching us watching them!) The Stellwagen Bank area off the tip of Cape Cod is home in season to a large colony of these leviathans and our whale watching cruise boat, complete with highly knowledgeable commentary from professional narrators, will take us into the thick of them. This is one of those few experiences that cannot be duplicated in a theme park. You have to go where the whales are! This tour also includes a visit to the New England Aquarium.

Sturbridge

Duration:estimated 7 hours
Fee:USD 50.-

A visit to Old Sturbridge Village is an opportunity to turn the clock back over 150 years and experience the life, work and celebrations of a rural New England community at the beginnings of the Industrial Revolution. Sturbridge Village consists of over 40 restored buildings set on 200 wooded acres. Displays and exhibits include a clock gallery, folk art and portraiture, firearms and militia accouterments, a working farm, blacksmith shop, sawmill, shoe repair shop, pottery barn, cooperage, gardens of culinary and medicinal herbs, and much more.

Newport

Duration: estimated 8 hours
Fee:USD 50.-

This is one of America's most fabled summer watering holes. To visit Newport is to jump into a different world where Astors and Vanderbilts thought nothing of setting aside $300,000 for summer entertaining -- in 1895! We will visit one of the lavish "summer cottages" that this pre-income tax group built for a ten-week season. We will stroll along the famed Cliff Walk and drive the scenic ten-mile Ocean Drive past one extravagant mansion after another. We will drive past Hammersmith, the spectacular (but modest in comparison) summer home of Jackie Onassis, scene of her wedding reception. We will shop and browse along Thames Street, admiring the splendid yachts that fill the harbor. Lunch is on your own.
But the key to this trip is gossiping about all the people who lived

here, beginning with Quakers and slave traders and ending with Claus von Bulow.

Gloucester and Rockport

Duration:estimated 8 hours
Fee:USD 50.-

Following a drive north through some of Massachusetts' more affluent shore communities, we reach Gloucester. Longfellow was writing about Gloucester in *The Wreck of the Hesperus*, Kipling in *Captains Courageous*, Junger in *The Perfect Storm*. Gloucester has been a rough and tumble fishing community and seaport since the 1600's and still is a little raw. A tribute to the fishing industry is the famous Helmsman statue overlooking Gloucester Harbor.
We will see the mountains of lobster traps, the battered fishing trawlers, the processing plants that define a "real" port, but we will also see the charming crooked streets and hazy seascapes that charmed painter Fitzhugh Lane.
From Gloucester we move on to Rockport for a leisurely few hours. Rockport is a sweet little fishing port filled with colorful boats, granite jetties, shops and the smell of salt air. On Bearskin Neck some may spend their time in the shops, others may clamor out the end of the granite breakwater for the views, others may choose the peaceful quiet of the bluss overlooking the harbor. Something for everyone!

Outlet Shopping in Kittery, Maine

Duration:estimated 7 hours
Fee:USD 50.-

Little over an hour north of Boston, Kittery boasts upward of 100 discount stores offering everything from designer clothes to bicycles. For international visitors, Kittery can be fabulous location for bargain shopping. Anyone interested in this trip should bring lists of sizes for the entire family.
People have returned from this trip with blue jeans, suits, designer dresses, silverware, racing bikes, lawn mowers. On the drive north, the escort will distribute maps and explain how Kittery is laid out. During the stay in Kittery, the bus will circle around so that participants can move easily between one group of stores and the

next. There will also be coupon books.

Boston - Yesterday and Today

Duration:estimated 4 hours
Fee:USD 35.-

This bus and walking tour focuses on Boston as it is today and how it developed. Boston is America's oldest city and reveals its history in overlapping layers. Although there will be significant amounts of historical information on this tour, the primary interest is in current life styles.
Highlights will include a tour of the Back Bay area, developed in the late 19th century, with a special stop at Trinity Church and at the John Hancock Tower for a view from the 60th floor Observation Lounge. We will also tour the South End, on the "cutting edge" in today's Boston where "gentrification" is gradually displacing an older mix of tenements and boarding houses.
We will stroll through Beacon Hill, where in the early 19th century the wealthy merchant families lived on the sunny South Slope and where the working class and African American families lived on the less desirable North Slope. And finally, we will explore the North End, home in the 18th century to American freedom fighters such as Paul Revere and home today to a colorful mix of Italian Americans and yuppies.

A Concord Pilgrimage 19th century home of literary giants

Duration:estimated 4 hours
Fee: USD 35.-

This tour will focus on the intellectual flowering of New England during the mid-19th century. These Transcendentalist writers were the "flower children" of their era and our tour will be interspersed with readings from all of them. (The tour will also be an opportunity for visitors to experience the charm of several New England communities outside the city.)

We will visit one of the following (and see the others): Orchard House where Louisa May Alcott wrote *Little Women*, Ralph Waldo Emerson's family home, the Manse where Nathaniel and

Sophia Hawthorne honeymooned, or the Wayside where first the Alcotts and then the Hawthornes lived for many years. We will stop at the Old North Bridge where the American War of Independence began, made famous by Emerson's *Concord Hymn*. We will also pay homage to Henry David Thoreau at Walden Pond. Thoreau's writings have influenced Ghandi and Martin Luther King, Jr., among others. This is a thoughtful tour for fans of these writers, as well as of Horace Mann, Bronson Alcott, Elizabeth Peabody, and Margaret Sydney. If you have forgotten some of these names, we will refresh your memory with a stop at Sleepy Hollow Cemetery where they all rest.

EBSCO Publishing Tour

Duration:estimated 6 hours
Fee:sponsored by EBSCO Publishing

EBSCO Publishing, a global leader in the supply of reference information to libraries, will be hosting a land and sea tour of its historic Ipswich based headquarters, the Essex River Basin and Ipswich Bay on Saturday, August 25, 2001. A traditional "New England Clambake" will be held in conjunction with this event. This event is going to be popular and availability is limited to the first 250 people who wish to participate. For more information about EBSCO Publishing please visit: www.epnet.com.

Latest Revision: *October 18, 2000*

67th IFLA Council and General Conference

Libraries and Librarians: Making a Difference in the Knowledge Age

August 16th - 25th 2001

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Technology, Globalization, and Multicultural Services in Libraries

SATELLITE MEETINGS

The following Satellite Meetings have been approved by the Professional Board:

Education and research for marketing and quality management in libraries / La Formation et la recherche sur le marketing et la gestion de la qualité en bibliothèque

Québec City, Québec, Canada, 14 - 16 August 2001

IFLA Sections on *Management and Marketing and on Education and Training,* in collaboration with the School of library and information science of the Université de Montréal.

The meeting will be held in English and in French, with simultaneous translation.Sponsors are the IFLA Sections on Management and Marketing and on Education and Training, in collaboration with the School of library and information science of the Université de Montréal, the Canadian Social Science and Humanities Research Council and by the Québec Ministry of International Relations.

More details at: http://www.fas.umontreal.ca/EBSI/ifla/
Information: Rejean.Savard@umontreal.ca

Library Consortia: Current Developments and Future Opportunities - an International Perspective

Digital Libraries for the Blind and the Culture of Learning in the Information Age

"How do I find a picture of ...?: the Changing Nature of Image Research

4th Northumbria International Conference on Performance Measurement in Libraries and Information Services

4th World Conference on Continuing Professional Education for the Library and Information Professions

Future Places: Reinventing Libraries in the Digital Age

Service, Management, and Leadership: Essential Tools for 21st Century Library and Information Administrators

17th Annual International Conference of Parliamentary Librarians

[ESPAÑOL]
[FRANÇAIS]

Boston, Public Library, 16 - 17 August 2001

IFLA's Divisions of General Research Libraries (I) and Management and Technology (VI), in collaboration with NELINET (New England Library Network) and the International Coalition of Library Consortia (ICOLC). This event will bring together international librarians to explore global developments in library consortia. The best ideas from experts will be presented to help determine the most appropriate strategies for consortia, and one can participate in a worldwide discussion on management issues vital to the delivery of efficient and cost-effective library consortium services.

More details at: http://silver.ohiolink.edu/ioclc/ifla-registration.html
Information: ahirschon@nelinet.net

Subject retrieval in a Networked Environment

Dublin, Ohio, 14 -16 August 2001

IFLA Sections Classification and Indexing and Information Technology, in collaboration with OCLC.

More details at: http://www.oclc.org/events/ifla/
Information: westalls@oclc.org

Technology, Globalization, and Multicultural Services in Libraries

Buffalo, New York, 14 -16 August 2001

IFLA Sections Library Services to Multicultural Populations and Information Technology

More details at: http://libris.lib.buffalo.edu/iflabuffalo
Information and registration: bvw@buffalo.edu

Digital Libraries for the Blind and the Culture of Learning in the Information Age

Washington, D.C., 13-15 August 2001

IFLA Section Libraries for the Blind in collaboration with the National Library Service for the Blind and Physically Handicapped, Library of Congress, Washington, DC and the Canadian National Institute for the Blind, Library for the Blind.

More details at: http://www.ifla.org/VII/s9/conf/preconf.pdf
Information and registration: Owenv@lib.cnib.ca or paterss@lib.cnib.ca
Exhibitors Information: barbara.mates@cpl.org

How do I find a picture of ...?: the Changing Nature of Image Research

Boston, Massachusetts, 16-17 August 2001

IFLA Section Art Libraries in collaboration with ARLIS/New England

More details at: http://www.library.yale.edu/arlis-ifla-2001/
Information: hwilburn@gsd.harvard.edu

4th Northumbria International Conference on Performance Measurement in Libraries and Information Services

Pittsburgh, Pennsylvania, 12-16 August 2001

IFLA Section Statistics in collaboration with the Association of Research Libraries.
More information at: http://www.arl.org/stats/newmeas/northumb.html

4th World Conference on Continuing Professional Education for the Library and Information Professions

Chester, Vermont 15 -17 August 2001

IFLA Round Table on Continuing Professional Education

More details: http://www.ifla.org/VII/rt7/rtcpe.htm#7

Information: bwools@wahoo.sjsu.edu

Future Places: Reinventing Libraries in the Digital Age

Boston, Northeastern University, 15 - 17 August 2001

12th Bi-annual Seminar of the IFLA Section Library Buildings and Equipment

More details: http://www.ifla.org/VII/s20/meeting/stlite01.pdf
or http://www.library.uiuc.edu/administration/ifla.htm
Information: b-clark@ux1.cso.uiuc.edu

Service, Management, and Leadership: Essential Tools for 21st Century Library and Information Administrators

Harvard Campus, Cambridge, MA, 16 - 17 August 2001
[On inviation only]

IFLA Section University Libraries and other General Research Libraries in collaboration with the Association of College and Research Libraries (ACRL) and the Harvard Institute for Higher Education

Information: susan_nutter@ncsu.edu

17th Annual International Conference of Parliamentary Librarians

Ottawa, Canada, 14 - 15 August 2001
[On inviation only]

IFLA Section Library and Research Services for Parliaments

Information: parer@parl.gc.ca

67th IFLA Council and General Conference

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INVITATION TO EXHIBIT AT IFLA 2001, BOSTON, USA

The 67th general conference of IFLA 2001 will be held in Boston, Massachusetts, USA, from August 16- August 25, 2001. The IFLA 2001 exhibition will be opened on Sunday evening August 19 and will close on Wednesday, August 22.

The 67th IFLA Conference is to attract the largest number of participants to date. It is expected that around *4,000 participants* will attend this conference with an exhibition with over 100 exhibitors.

IFLA's conference and exhibition is the biggest international event for professionals within the library and information sector. IFLA 2001 offers an excellent opportunity for thousands of delegates, experts, and library and information providers from all over the world to exchange ideas and experience as well as to introduce new innovations and products.

Future Conferences

68th IFLA General Conference
Glasgow, 2002

69th IFLA Council and General Conference
Berlin, 2003

70th IFLA General Conference
Buenos Aires, 2004

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Exhibitions Subcommittee

[ESPAÑOL]
[FRANÇAIS]

The 67th Conference and Exhibition will be held at the Hynes Convention Center, Boston, Massachusetts, USA. The Hynes Convention Center is located in the heart of Boston, the two large exhibition halls can accommodate 415 booths. (Catering facilities in the exhibition area will include coffee and lunch corners). If you are interested in sponsorship opportunities please refer to the sponsor brochure or contact Congrex Holland for details at: ifla2001@congrex.nl.

Exhibitors at IFLA 2001

List of companies and organizations that will be exhibiting at IFLA 2001

Who should exhibit?

The exhibition is open to all companies, governmental bodies and other organizations with products and services related to the library field, such as:

Automation

Authority Control
Bar codes
Cataloguing
CD-rom
Computer Software
Computer & peripheral equipment
Databases
Document Delivery systems
Electronic imaging systems
Internet Services
Integrated library
Library automated systems
Library cards
Literacy
Magnetic strip cards
Media Management
Microsystems
Multimedia
Networking
On-line search services
OPAC
Reference systems
Retro conversion
Serials/ACQ systems

Books, Periodicals & Documents

ADA
Art books
Antiquarian
CE-rom
Children's books
Demographics
Directories
Encyclopedias
Government documents
Journals & periodicals
Large print books
Library science texts
Literature & criticism
Microfilms
Microfiche
Music & Music reference
Religion
Poetry books
Resource and activity books
Scholarly books
Science books
Technical books
Travel books

Tape proceedings
Web products

Audio/Visual Equipment & Materials
Assistive listening devices
Audio books
Audiovisual equipment
Book & Audio packages
Film & video laser discs
Magnification devices
Music

Equipment, Furniture & Supplies
Archival products
Binders
Bookbinding technology
Copiers
Environmental products
Furniture
Mobile storage
Photo ID systems
Promotional products
Security systems
Shelving
Sign systems
Storage systems
Supplies

Service
Architecture & interior design
Book wholesalers
Book & audio leasing
Consultants
Database conversions
Database preparation
Finance
Information provider
Interlibrary loan services
Library promotion
Reading promotion
Serial dealers
Subscription service
Telecommunications

Exhibitor Sneak Preview

Hynes Convention Center
Boston, Massachusetts
August 16-25, 2001

Hold Those Dates

Show Dates August 19-22

IFLA Boston 2001

The International Federation of Library Associations and Institutions (IFLA) is an international association located in The Hague, Netherlands created to provide librarians from around the world with a forum for exchanging ideas and promoting international cooperation, research, and development in all fields of library activity. IFLA holds a conference in a different country each year. This meeting is anticipated to draw 3,000 participants from around the world.

Exhibition information

Booth Size	Price	Complimentary Exhibitor Registrations
10' x 10'	$1,500	2

Island Size	Price	Complimentary Exhibitor Registrations
10' x 20'	$2,500	4
20' x 20'	$ 6,000	6
20' x 30'	$10,000	8

Social program

A ticket for the social program can be bought for USD 150.- per complimentary exhibitor registration.

Payment

Applications must be accompanied by a payment of 50% of the total booth rental amount. Balance of fee will be invoiced and will fall due for payment on December 29, 2000. Payments must be made by U.S. Dollars (USD) made payable to the 67th IFLA conference exhibition. If the application is received after all space is exhausted, the payment will be refunded. Failure to comply with these requirements forfeits all right to space, which may in such case be reassigned to others, with no obligations on the part of 67th IFLA Conference.

Minimum stand size

The minimum stand size is 10' x 10'

Floor plan, space application and allocation of stand sites

On the preliminary floor plan [Adobe Acrobat PDF: 97KB, 107KB] the available stand sites are indicated. You are kindly requested to study the floor plan and mark your first three choices on the **application form** [Adobe Acrobat PDF: 148KB]. Please note that it is possible to make combinations of more than one space, or to divide stands into smaller units, if necessary. Space assignments will be solely at the discretion of the 67th IFLA Conference, however, in case of conflicting requests preference be afforded those exhibitors with continuing participation in past years and those exhibitors who sponsor the conference.
Stand allocations will be made prior to January 31, 2001; all applications should therefore have been received no later than December 15, 2000. All choices expressed in applications received by **December 15, 2000** will be considered, however the organizers reserve the right to allocate exhibitors to the most appropriate stands.

Advertising, Direct Mail and Promotional Opportunities

Increase traffic at your booth by advertising in IFLA Express mailed to all IFLA members and registrants prior to the Conference) and Daily Programs (distributed to all conference attendees), and by purchasing the pre-registration mailing list.

Exhibitors manual

More detailed exhibit information and instructions, including order forms for services and supplies will be included in the Exhibitors manual which will be mailed to exhibitors at the same time as the confirmation of the exhibition space.

Exhibition schedule

Thursday	August 16	8.00 a.m. – 4.30 p.m.	Decorator move-in
Friday	August 17	8.00 a.m. – 8.00 p.m.	Build-up of stands of 20' x 20' and larger
Saturday	August 18	8.00 a.m. – 8.00 p.m.	Build-up of all stands
Sunday	August 19	8.00 a.m. – 1.00 p.m. 1.00 p.m. – 4.00 p.m. 17.45 p.m.–19.00 p.m.	Final touch all stands Hall inspection Opening exhibition & Reception
Monday	August 20	10.00 a.m. – 4.00 p.m.	Exhibition
Tuesday	August 21	10.00 a.m. – 5.30 p.m.	Exhibition
Wednesday	August 22	11.00 a.m. – 3.00 p.m. 3.00 p.m. – 8.00 p.m	Exhibition Break-down exhibition
Thursday	August 23	8.00 a.m. – 5.30 p.m.	Break-down exhibition

Cancellation

All cancellations must be made in writing to the Conference Secretariat

- Cancellations must be made before December 15, 2000
  50% deposit is non-refundable
- Cancellation between December 15, 2000 and March 15, 2001
  50% of the total amount is non-refundable
- Cancellation between March 15, 2001 and May 15, 2001
  75% of the total amount is non-refundable
- Cancellation after May 15, 2001
  No refunds

Hotel accommodation

Exhibitors will have the opportunity to book hotel accommodation. The preliminary program together with registration and hotel booking form will be sent to you upon receipt of your exhibitor application form.

Exhibition and Conference Secretariat

Invitation to exhibit [Adobe Acrobat PDF: 264KB]

CONGREX HOLLAND BV
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1000 AH Amsterdam
The Netherlands

Telephone: +31 20 50 40 206
Telefax: +31 20 50 40 225
E-mail: ifla2001@congrex.nl

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International Federation of Library Associations and Institutions
www.ifla.org